

BI7DRR and CPI Inflation Impacts on IDX30 Index Fund Performance with TER Moderation

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Abstract

In this study, the author aims to analyze the effect of interest rates and inflation on the performance of conventional index mutual funds (IDX30) with the Tracking Error Ratio (TER) as a moderating variable. The study was conducted at PT BNI Asset Management, one of the leading investment management companies in Indonesia registered with the Financial Services Authority (OJK), using data obtained from 2020 to 2024. The research method employed is a quantitative approach with secondary data analysis using Eviews. The findings of this study indicate that interest rates have a negative and significant effect on the performance of index mutual funds, inflation has a negative and significant effect on the performance of index mutual funds, the tracking error ratio is able to moderate the effect of interest rates on the performance of index mutual funds by weakening the negative relationship between them, and the tracking error ratio is also able to moderate the effect of inflation on the performance of index mutual funds by weakening the negative relationship between them

Keywords: *Tracking Error Ratio (TER), Investment Risk, Index Mutual Fund Performance, Conventional Index Mutual Fund*

INTRODUCTION

Mutual funds are collective investment vehicles that pool funds from various investors to be invested in portfolios of securities such as stocks, bonds, or other money market instruments. Through mutual funds, both institutional and individual investors can gain access to diversified portfolios managed professionally. Therefore, mutual funds

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serve as a means of mobilizing funds from the public who have capital and the desire to invest but possess limited time and knowledge (Oefele et al., 2023).

Investment risk factors are external to the firm but influence increases or decreases in corporate performance, either directly or indirectly (Novalia et al., 2025). Prowanta (2025) explains that risk management also plays a key role in investment management and compliance with existing regulations. Investment risk is a primary concern, as fluctuations in stock prices and other financial instruments can significantly affect investment value.

The development of the capital market can be observed through various market performance indicators summarized in an index known as a stock market index. The Indonesia Stock Exchange (IDX) also issues another stock index, namely the IDX30 Index, which consists of the performance of 30 (thirty) of the most liquid and large-capitalization stocks in the Indonesian stock market, and which forms part of the LQ45 index of highly liquid stocks.

Table 1: General Data of the IDX30 Index for the 2020–2024 Period

Years	Close Price	Growth
2020	502.27	-11.18%
2021	497.10	-1.04%
2022	488.14	-1.8%
2023	495.21	1.4%
2024	423.48	-14.48%

Source: Results of data processing from the IDX fact sheet

From Table 1, it can be seen that the performance of the IDX30 Index closed at a level of 502.27 at the beginning of 2020 and at 423.48 at the end of 2024, indicating that the IDX30 Index declined by -14.48%. Based on this performance, further research can be conducted on the performance of IDX30 Index Mutual Funds, the factors that may influence their performance, and the tracking error ratio (TER) of the IDX30 Index over the period from 2020 to 2024.

The selection of the interest rate variable is based on the rationale that an excessively high increase in prevailing interest rates serves as a negative signal for stock prices, which may lead investors to withdraw their investments from stocks and shift them to savings or deposit instruments (Ananda & Santoso, 2022). The use of the BI Rate



(BI7DRR) as the interest rate indicator is considered relevant because its movements have both direct and indirect effects on the capital market and investment instruments, including index mutual funds. An increase in the BI Rate (BI7DRR) generally suppresses stock market performance by raising borrowing costs and encouraging investors to switch to low-risk instruments (Hakim, 2023).

The relevance of CPI-based inflation to the performance of conventional index mutual funds (IDX30) is clearly evident. When inflation rises, particularly due to increases in staple food prices, people's purchasing power tends to decline. This condition can reduce demand for various consumer products, which ultimately affects the performance of companies listed on the Indonesia Stock Exchange, including stocks that constitute the IDX30 Index (Sari et al., 2023).

Most studies analyze the Tracking Error Ratio (TER) as a risk indicator or a tool to measure the degree of active management in mutual funds. Sáez & de Mingo-López (2025) and Charteris & McCullough (2020) evaluate the components of TER in the context of interim trading and mutual fund performance, without considering the moderating role of TER on macroeconomic factors such as interest rates (BI7DRR) and Consumer Price Index (CPI) inflation. This is where the research gap of this study lies, by positioning TER as a moderating variable.

Based on the above discussion, during the 2020–2024 period, the performance of the IDX30 Index experienced a fairly significant decline, from a level of 502.27 at the beginning of 2020 to 423.48 at the end of 2024, representing a decrease of –14.48%. This decline indicates substantial pressure on the leading stocks that constitute the IDX30 Index. Given these conditions, it is interesting to examine the performance of IDX30-based index mutual funds, particularly those managed by PT BNI Asset Management, as well as the macroeconomic factors that may influence their performance

Objectives

Drawing on the background outlined above, this study aims to explore and answer several core research questions within the field of auditing

1. To analyze the effect of interest rates (BI7DRR) on the performance of conventional index mutual funds (IDX30)
2. To analyze the effect of Consumer Price Index (CPI) inflation on the performance of conventional index mutual funds (IDX30)



3. To examine the moderating role of the Tracking Error Ratio (TER) in the effect of interest rates (BI7DRR) on the performance of conventional index mutual funds (IDX30)
4. To examine the moderating role of the Tracking Error Ratio (TER) in the effect of Consumer Price Index (CPI) inflation on the performance of conventional index mutual funds (IDX30)

This study employs a quantitative approach with a causality design, aiming to examine the cause-and-effect relationships between the independent variables—interest rates (BI7DRR) and inflation (CPI)—and the dependent variable, namely the performance of conventional index mutual funds (IDX30), with the Tracking Error Ratio (TER) serving as the moderating variable.

This study uses a target population consisting of conventional IDX30-based index mutual funds managed by state-owned (BUMN) investment managers with Assets Under Management (AUM) exceeding IDR 10 billion during the 2020–2024 period. As of December 31, 2020, only one state-owned investment manager listed on Pasardana—BNI Asset Management (BNIAM)—had an IDX30 index mutual fund product with Assets Under Management (AUM) exceeding IDR 100 billion, with total AUM amounting to IDR 805,352,036,274

In this study, the author applies a purposive sampling technique. The sample consists of IDX30 index mutual funds that have complete monthly return data throughout the research period, whose tracking error ratio (TER) can be calculated historically, and that invest in IDX30 constituent stocks as their benchmark index. By applying this sampling technique, the population is narrowed to conventional IDX30 index mutual funds managed by PT BNI Asset Management during the 2020–2024 period, which have complete data on returns, tracking error ratio (TER), and investment risk

This study tests the relationships among variables consisting of independent variables—interest rates (BI7DRR) and inflation (CPI), a moderating variable—the Tracking Error Ratio (TER), and a dependent variable—the performance of the IDX30 index mutual fund. Examining these relationships requires operational definitions of each variable, which aim to describe the indicators or measurements of each variable that will subsequently be translated into numerical data



Table 2: Variable Operational

No	Variable	Definition	Formulation	Scale
1	<i>Tracking Error Ratio</i> (TER) (M)	A measure of the volatility of the difference in returns between an index mutual fund and its benchmark index	$TE = R_{pt} - R_{it}$	Ratio
2	Interest Rate (BI 7DRR) (X1)	The interest rate set by the Central Bank of Indonesia	Monthly data from Bank Indonesia	Ratio
3	Consumer Price Index (CPI) Inflation (X2)	Inflation is a condition in which the general price level of goods and services increases	$\frac{IHK_t - IHK_{t-1}}{IHK_{t-1}}$	Ratio
4	Index Mutual Fund Performance (IDX30) (Y)	The calculation is carried out by first determining the monthly NAV by dividing the number of mutual fund units by the Assets Under Management (AUM), after which the difference between the current month's NAV and the previous month's NAV is calculated	$\frac{NAB_t - NAB_{t-1}}{NAB_{t-1}}$	Ratio

Data were collected using a documentation technique by accessing financial statements, mutual fund prospectuses, and mutual fund unit price data from official sources, as well as data from the Indonesia Stock Exchange (IDX), Bank Indonesia, Statistics Indonesia (BPS), and PT BNI Asset Management, along with financial websites such as Bloomberg, Infovesta, and the Financial Services Authority (OJK). The data analysis in this study employs multiple linear regression analysis and Moderated Regression Analysis (MRA), with quantitative data processing and analysis conducted using EViews 10 software



DISCUSSION**Table 3: Descriptive Variable**

	PERFORMANCE	INTEREST RATE	INFLATION	TER
Mean	-0.064762	4.745833	0.218833	0.958800
Median	-0.016169	4.500000	0.165000	0.981000
Maximum	1.779279	6.250000	1.170000	1.090000
Minimum	-4.313433	3.500000	-0.210000	0.687000
Std. Dev.	0.015804	1.105161	0.175386	0.093583

Source: EViews 10 output, processed data

Based on Table 3, the performance of the index mutual fund shows an average (mean) value of -0.064 , indicating that during the study period the fund failed to generate positive returns and instead tended to deliver negative returns to investors. This average decline in NAV suggests that the fund's performance was suboptimal and consistently reflected a loss trend. The lowest performance (minimum) of -4.313 occurred in May 2022, while the highest performance (maximum) of 1.779 was recorded in June 2022. The standard deviation of 0.015 , which is lower than the mean, indicates that the data are relatively homogeneous.

For the interest rate variable (BI7DRR), the average value is 4.745 , reflecting relatively stable monetary conditions maintained by Bank Indonesia. At this moderate level, interest rates tend to make stock market instruments, including index mutual funds, more attractive compared to fixed-income investments. The lowest BI7DRR value was 3.50 , observed from February 2021 to July 2022, while the highest value of 6.25 occurred between April and August 2024. The standard deviation of 1.105 indicates relatively uniform data.

The inflation variable (CPI) records an average value of 0.218 , indicating price stability in the economy. Low inflation supports purchasing power and provides a favorable environment for investment in capital market instruments. The minimum inflation value of -0.21 occurred in August 2021, while the maximum value of 1.17 was recorded in September 2022. The standard deviation of 0.175 suggests low variability.

For the Tracking Error Ratio (TER), the average value is 0.958 , indicating that the mutual fund closely tracks the IDX30 index, with relatively small deviations in performance. This reflects effective portfolio management in replicating the benchmark index. The minimum TER value of -0.210 occurred in May 2020, while the maximum



value of 1.090 was recorded in April 2022. The standard deviation of 0.093, which is lower than the mean, indicates that the TER data are relatively consistent

Table 4: Classic Assumption Test

Test	Indicator	Score	Result
Normality Test	Prob JB	0.200	No Issue
Multicollinearity Test	Centered VIF	1.025	No Issue
Heteroskedasticity Test	Prob. Chi-Square	0.248	No Issue
Autocorrelation Test	Prob. Chi-Square	0.374	No Issue

Source: EViews 10 output, processed data

The Jarque–Bera (JB) probability value at a 5% significance level is 0.200, indicating that the data are normally distributed. The multicollinearity test results show no multicollinearity among the independent variables, as all Variance Inflation Factor (VIF) values are below 10. Furthermore, the heteroskedasticity test yields an Obs*R-square p-value of 0.248, which is greater than 0.05, leading to the acceptance of H_0 and indicating that the data are homoscedastic. The autocorrelation test results show a Chi-square probability value of 0.400, exceeding the 5% significance level, which indicates the absence of residual autocorrelation. Therefore, the data used in this study meet the classical assumption requirements and are suitable for further analysis

Table 5: Moderated Regression Analysis

Variable	Coefficient	t-Statistic	Prob.
C	12.99539	1.513925	0.1359
INTEREST RATE	-3.235930	-4.667562	0.0000
INFLATION	-5.787461	-5.006763	0.0000
TER	13.81560	6.566969	0.0000
INTEREST RATE _TER	-3.370149	-3.714745	0.0021
INFLATION _TER	-5.386386	-3.957214	0.0007
R-squared	0.597		
Prob(F-statistic)	0.000		

Source: EViews 10 output, processed data



It can be concluded that the constant coefficient has a value of 0.647, meaning that if all independent variables are equal to zero, the performance of the index mutual fund is 0.647. The regression coefficient of the interest rate (BI7DRR) is -0.317 with a p-value of 0.000, indicating that a one-unit increase in the BI7DRR leads to a decrease of 0.317 in index mutual fund performance. Similarly, the inflation (CPI) regression coefficient is -0.308 with a p-value of 0.000, which implies that a one-unit increase in inflation reduces index mutual fund performance by 0.308.

Furthermore, the regression coefficient for the interaction between the interest rate and the Tracking Error Ratio is -3.370 , suggesting that an increase in the Tracking Error Ratio weakens the effect of interest rates on index mutual fund performance. The interaction coefficient between inflation and the Tracking Error Ratio is -5.386 , indicating that a higher Tracking Error Ratio also weakens the effect of inflation on the performance of index mutual funds

From the table above, it can be concluded that the coefficient of determination indicates that interest rates, inflation, the interaction between interest rates and the Tracking Error Ratio, and the interaction between inflation and the Tracking Error Ratio explain 0.597, or 59.7%, of the variation in index mutual fund performance. The remaining 40.3% is influenced by other variables not examined in this study. Based on the F-test (simultaneous test) results, the Prob(F-statistic) value is 0.000, which is lower than the 0.05 significance level. This finding indicates that interest rates, inflation, and their interactions with the Tracking Error Ratio jointly have a significant effect on the performance of index mutual funds

Table 6: Hypotheses Test

Variable	Coefficient	t-Statistic	Prob.	Result
INTEREST RATE	-3.235930	-4.667562	0.0000	Supported
INFLATION	-5.787461	-5.006763	0.0000	Supported
TER	13.81560	6.566969	0.0000	Supported
INTEREST RATE _TER	-3.370149	-3.714745	0.0021	Supported
INFLATION _TER	-5.386386	-3.957214	0.0007	Supported

Source: EViews 10 output, processed data

Based on the partial significance test (t-test), interest rates are found to have a negative and significant effect on index mutual fund performance. This indicates that



increases in the benchmark interest rate weaken index mutual fund performance, while decreases in interest rates tend to improve it. This relationship can be explained by investor behavior, as higher interest rates encourage investors to shift funds to low-risk instruments such as deposits or bonds, reducing investment in the stock market, including index mutual funds. Conversely, lower interest rates motivate investors to seek higher returns in the stock market, thereby enhancing index mutual fund performance. This finding is consistent with the Efficient Market Hypothesis (EMH), which suggests that changes in interest rate policy are quickly reflected in stock prices and, consequently, in index mutual fund performance. The results are in line with previous studies by Cheng & Dewi (2020), Alfiana et al. (2024) and Khairunisa et al. (2023), which also report a negative and significant effect of interest rates on index mutual fund performance.

Based on the partial significance test (t-test), inflation is found to have a negative and significant effect on index mutual fund performance. This means that an increase in inflation leads to a significant decline in index mutual fund performance. Rising inflation generally increases production costs and reduces purchasing power, which puts pressure on the performance of companies included in the IDX30 index and is reflected in declining stock prices. In contrast, well-controlled inflation supports healthier economic growth and better stock market performance. This negative effect is consistent with the Efficient Market Hypothesis (EMH), which suggests that information on inflation changes is quickly absorbed by the market and reflected in stock prices. Consequently, index mutual fund performance directly mirrors market responses to inflation dynamics. These findings are in line with previous research by Alfiana et al. (2024), which also reports a negative and significant effect of inflation on index mutual fund performance.

Based on the partial significance test (t-test), the Tracking Error Ratio is found to moderate the effect of interest rates on index mutual fund performance by weakening their negative relationship. This indicates that although rising interest rates generally reduce index mutual fund performance as investors shift toward low-risk instruments, a well-controlled tracking error helps prevent this effect from fully eroding fund performance. The Tracking Error Ratio reflects how closely a fund follows its benchmark index, and effective management of portfolio deviations can reduce market volatility arising from interest rate changes. In line with the Efficient Market Hypothesis, while the market quickly and rationally responds to interest rate information, disciplined tracking error management allows index mutual fund performance to remain relatively stable despite upward pressure on interest rates.



Based on the partial significance test (t-test), the Tracking Error Ratio is able to moderate the effect of inflation on index mutual fund performance by weakening the negative relationship between the two. This indicates that although rising inflation generally suppresses index mutual fund performance through higher production costs, reduced purchasing power, and declining stock prices, effective portfolio management that maintains close alignment with the benchmark index prevents inflation from fully eroding fund performance. A well-controlled Tracking Error Ratio reflects the investment manager's ability to limit deviation risk, so even though inflation information is quickly absorbed by the market in line with the Efficient Market Hypothesis, its negative impact does not significantly undermine index mutual fund performance, resulting in greater stability during periods of economic volatility

CONCLUSION

The benchmark interest rate (BI7DRR) is proven to have a negative and significant effect on index mutual fund performance, as increases in interest rates tend to suppress performance. This finding is consistent with capital market theory, where higher BI7DRR levels make low-risk instruments such as deposits and bonds more attractive, increasing opportunity costs and encouraging capital outflows from high-risk assets like equities, which underpin index mutual funds. Inflation is also found to have a negative and significant effect on index mutual fund performance, as rising inflation reduces performance through higher production costs, declining purchasing power, and increased economic uncertainty that weakens stock prices within the IDX30 index.

Furthermore, the Tracking Error Ratio (TER) is shown to moderate the effect of both interest rates and inflation on index mutual fund performance by weakening their negative impacts. Although rising interest rates and inflation are fundamentally detrimental to performance, effective portfolio management that maintains a low and stable TER helps mitigate these adverse effects. This indicates that efficient index replication and disciplined portfolio management play a crucial role as a buffer against macroeconomic pressures and price uncertainty.

For investment managers at PT BNI Asset Management, greater discipline in managing the Tracking Error Ratio is recommended to minimize the impact of interest rate and inflation fluctuations on index mutual fund performance. Maintaining close alignment with the benchmark index can help stabilize returns and strengthen investor confidence. Then, the findings highlight the importance of considering macroeconomic conditions, particularly interest rates and inflation, before investing in index mutual funds.



Since increases in these factors may reduce performance, prudent asset allocation and portfolio diversification are advised to mitigate risk

REFERENCES

- Affifah, A. N., & Susilowati, E. (2021). Pengaruh Audit Tenure dan Ukuran KAP terhadap Audit Report Lag (ARL) dengan Kualitas Audit sebagai Variabel Intervening (Studi pada Perusahaan BUMN yang Terdaftar di Bursa Efek Indonesia Periode 2015-2019). *Akuntansi Dan Manajemen*, 16(1), 21–36. <https://akuntansi.pnp.ac.id/jam>
- Ainun, S. (2024). Audit Quality : The Impact of Auditor Competence , Independence , and Professionalism with Evidence Competence as Mediator. *Dawi Journal*, 2(3), 422–432.
- Aswar, K., Akbar, F. G., Wiguna, M., & Hariyani, E. (2021). Determinants of audit quality : Role of time budget pressure. *Problems and Perspectives in Management*, 19(2), 308–319. [https://doi.org/10.21511/ppm.19\(2\).2021.25](https://doi.org/10.21511/ppm.19(2).2021.25)
- Fauziah, D., & Yuskar. (2023). The Effect of Professionalism, Independence, Accountability, and Time Pressure on Audit Quality with Auditor Professional Ethics as Variable Moderating. *JASa (Jurnal Akuntansi, Audit Dan Sistem Informasi Akuntansi)*, 7(1), 190–204.
- Felicya, C., & Sutrisno, P. (2020). Pengaruh Karakteristik Perusahaan, Struktur Kepemilikan Dan Kualitas Audit Terhadap Manajemen Laba. *Jurnal Bisnis Dan Akuntansi*, 22(1), 129–138. <https://doi.org/10.34208/jba.v22i1.678>
- Manley, S. C., Hair, J. F., Williams, R. I., & McDowell, W. C. (2021). Essential new PLS-SEM analysis methods for your entrepreneurship analytical toolbox. *International Entrepreneurship and Management Journal*, 17(4), 1805–1825. <https://doi.org/10.1007/s11365-020-00687-6>
- Masita, Su, M., & Sari, R. (2021). Point of View Research Accounting and Auditing The Effect of Auditor Competence, Independence and Professional Skepticism of Auditors on the Audit Quality Keyword: Auditor Competence Independence Professional Skepticism Audit Quality. *Point of View Research Accounting and Auditing*, 2(2), 160–167. <https://journal.accountingpointofview.id/index.php/povraa>
- Meliala, R. N. B., Pratama, A. A., Firmansyah, A., & Amyar, F. (2023). How Auditor's Professionalism, Independence, And Information Technology Influence Audit Quality. *Proceedings of the International Conference in Technology, Humanities and Management (ICTHM 2023)*, 12-13 June, 2023, Istanbul, Turkey, 131, 963–979. <https://doi.org/10.15405/epsbs.2023.11.79>



- Pham, Q. T., Giang, T., Tran, T., Ngoc, T., Pham, B., Ta, L., Pham, Q. T., Giang, T., Tran, T., Ngoc, T., Pham, B., & Ta, L. (2022). Cogent Business & Management Work pressure , job satisfaction and auditor turnover : Evidence from Vietnam Work pressure , job satisfaction and auditor turnover : Evidence from Vietnam. Cogent Business & Management, 9(1). <https://doi.org/10.1080/23311975.2022.2110644>
- Safitri, A., & Arifin, A. (2022). The Influence Of Professional Ethics , Professionalism , Independence , And Experience On The Materiality Level Of Public Sector Financial Report Auditors (Auditor at KAP Djoko , Sidik , and Indra). Sinomics Journal, 1(5), 681–690.

