

Inflation, DER, PER, and TATO as Determinants of Capital Gains for Indonesian Telecommunication Companies (2020-2025)

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Abstract

Telecommunications sector stocks are widely regarded as stable, defensive investments, attractive to investors due to consistent capital gains and reliable dividend yields. Financial performance across major operators shows revenue growth, though accompanied by rising operational costs driven by network investment and corporate actions, while growth of the digital economy and demand for internet data continue to drive capital gains. Focusing on ten telecommunications companies over the 2020–2025 period, this study explores how capital gains are shaped by the Debt-to-Equity Ratio (DER), the Price-Earnings Ratio (PER), Total Asset Turnover (TATO), and the inflation rate. A panel data regression framework was employed, with model selection guided by the Chow, Hausman, and Lagrange Multiplier procedures, alongside classical assumption testing to confirm that the estimates were consistent, unbiased, and precise. The results indicate that inflation negatively and significantly affects capital gains, while DER, PER, and TATO are all positively and significantly associated with capital gains in partial analyses. Jointly, these four predictors explain 9% of the variance in capital gains and exert a collectively significant influence. Because telecommunications stocks often experience price swings, fundamental analysis remains vital for determining true share value and appraising business fundamentals, beyond what short-term price actions reveal. Asset values are further shaped by infrastructure expansion, including fiber-optic networks, base transceiver stations, and data centers, as well as by capital structure and leverage, which influence firm value. Between 2020 and 2025, inflation in Indonesia remained relatively stable, though its rise contributed to higher operating costs and profit stagnation.

Keywords: Capital Gains, Debt-to-Equity Ratio, Inflation, Price-Earnings Ratio, Total Asset Turnover.

1. Introduction

Capital gain, defined as the profit realized when a stock's selling price exceeds its purchase price, represents one of the two primary elements of total stock returns, the other being dividend income (Kustina et al., 2019). Capital gains are shaped by a combination of company-specific fundamentals, prevailing market environments, and broader economic indicators, including inflation, interest rates, GDP growth, exchange rate movements, monetary liquidity, and fiscal or regulatory policy decisions.

Indonesia's telecommunications sector plays a strategic role due to its dynamic and competitive nature and its requirement for substantial infrastructure investment. Telecommunications companies must maintain strong financial performance to remain attractive to investors. Fundamental analysis, utilizing DER, PER, TATO ratios, is employed to assess asset utilization efficiency, debt financing structures, and stock valuations.

The 2020-2025 period is significant for analysis as it encompasses the COVID-19 pandemic (Rosman & Yudanto, 2022), economic recovery, fluctuations in inflation and



interest rates, and the acceleration of digital transformation and 5G implementation. The evolution of 5G networks is strongly linked to the overarching shift toward digitalization across sectors. As noted by Kartawinata et al. (2020), internet user growth has been remarkably rapid and continues to exhibit substantial increases. Furthermore, Kartawinata et al. (2024) find that the swift progression of digital technologies is exerting a beneficial influence on Indonesia's economic expansion. The pandemic heightened the demand for connectivity, data services, and digital technologies, driven by "work-from-home" and "school-from-home" policies. However, these conditions also led to stock market volatility and uncertainty regarding investor returns.

Estimates indicate that the worldwide 5G value chain could deliver US\$3.5 trillion in total production and create about 22 million employment opportunities by 2035, outpacing the aggregate worth of today's mobile sector. Meanwhile, annual investment flows of roughly US\$200 billion are forecasted to accelerate deployment efforts and fortify the technological backbone of 5G across networks, commercial use cases, and supporting facilities (Campbell et al., 2017).

Indonesia experienced a rise in inflation in 2022. This inflationary pressure drove up production costs, including expenses for raw materials and labor, thereby causing the prices of goods and services to rise. In the telecommunications sector, interest rates and inflation influence stock prices. While rising interest rates tend to depress stock prices, inflation has been reported to have a positive impact on certain companies in the sector, as they are deemed capable of adjusting prices for essential services. Consequently, telecommunications stocks can be considered an inflation hedge, although investors must still monitor overall macroeconomic conditions.

The global economic slowdown has been driven by inflation, exchange rate fluctuations, and geopolitical tensions including the conflicts between Iran and the United States and between Russia and Ukraine (Sanoyo et al., 2024). These conditions can drive up energy prices, affect local currency values against the US dollar, compromise digital infrastructure security, and ultimately hinder investment and the financial performance of telecommunications companies.

Several key factors, namely inflation, foreign direct investment, fiscal spending, and economic openness, contribute to the dynamics of national growth. While increased foreign investment, government expenditure, and trade accessibility are capable of driving substantial improvements in economic performance, rising inflation levels are associated with a slight deceleration in Indonesia's overall growth rate Hidayat, Purwanda, Hadijah, et al. (2024). ASEAN trade integration can also strengthen trade balances and attract foreign investment through cooperation, facility support, and infrastructure development. These conditions ensure that major Indonesian telecommunications companies remain attractive to global investors.

Assets in this sector consist primarily of non-current or fixed assets, such as base transceiver stations (BTS), fiber-optic cables, land, buildings, telephone exchanges, and frequency spectrum licenses. Due to the substantial value of these physical assets, asset turnover ratios tend to be low. Infrastructure development often cannot be funded solely by internal cash or paid-in capital, consequently, telecommunications and infrastructure companies tend to maintain moderate to high leverage levels to expand their productive assets. Effective leverage management can boost revenue and corporate value, whereas excessive leverage coupled with high interest expenses will depress profitability.

Infrastructure development is a key strategy for accelerating economic growth, as infrastructure, spanning telecommunications, information technology, and investment, collectively boosts the productivity of goods and services. Economic growth manifests as sustained improvements in public welfare. The development of telecommunications

infrastructure and the deployment of related services contribute to rising per capita income, poverty reduction, decreased inequality, and the strengthening of inclusive economic growth. Furthermore, economic growth enhances the capacity of both the government and the public to invest while simultaneously expanding the demand for telecommunications services.

Major telecommunications operators, such as Telkom Group, IOH, and XLSmart have focused on network fiberization, 4G expansion, and initial 5G rollouts during the 2020-2025 period. Several operators and telecommunications companies have executed tower spin-offs, transferring thousands of towers to subsidiaries, to secure infrastructure funding and optimize their balance sheets.

The implementation of 5G, the construction of base transceiver stations (BTS) and fiber-optic networks, and the development of digital services create long-term revenue growth opportunities for telecommunications companies, albeit requiring substantial investment and increased funding. External factors such as inflation, geopolitical conflicts, exchange rate fluctuations, government policies, and a global economic slowdown, can drive up operational costs, impact investment decisions, and alter investor sentiment regarding telecommunications stocks.

Although researchers have extensively analyzed the factors influencing stock prices and returns, relatively few have examined the factors affecting capital gains; this constitutes the novelty of the present study. While numerous variables encompassing fundamental, macroeconomic, and microeconomic aspects, potentially determine capital gains, only a few actually exert a significant influence.

This study measures the impact of DER, PER, TATO, inflation on the capital gains of Indonesian telecommunications companies from 2020 to 2025. The findings are expected to benefit investors in portfolio construction, management in formulating financial and funding strategies, regulators in policy formulation, and academics in expanding research on the determinants of capital gains within the telecommunications sector.

2. Literature Review

As a quantitative tool, financial ratio analysis examines relationships between figures derived from core accounting documents, namely the balance sheet, profit and loss statement, and cash flow report. Through this examination, analysts can gauge corporate efficiency and fiscal stability. Companies often turn to this method during efforts to boost enterprise value, particularly when addressing the interests of investors, executives, and equity holders.

This study uses various factors influencing stock returns and capital gains as indicators for financial ratio analysis, with these ratios serving as key signals for investors assessing potential capital gains. Encompassing activity, solvency, and market ratios, financial ratio analysis enables shareholders and management to determine strategic moves, evaluate overall financial performance, and benchmark the company against sector competitors. Beyond company-specific factors, macroeconomic conditions are also considered given their impact on stock returns and capital gains. Accordingly, this study employs activity indicators (TATO), market indicators (PER), solvency indicators (DER), and macroeconomic variables (inflation).

By weighing both earnings potential and investor expectations, companies can leverage these findings to optimize their market valuation strategies. The insights also offer practical direction for navigating macroeconomic volatility that affects operational results. In addition, the detected metrics are useful for identifying growth trajectories within firms, a development that typically points to elevated equity returns and thus fuels capital gains over time.

2.1. Inflation

A general and ongoing escalation in the cost of goods and services defines inflation. Price rises limited to a handful of products are not considered inflationary unless they propagate to other categories. Common factors behind elevated inflation rates include burdensome logistics costs, suboptimal productivity, and expensive credit access. Flawed market structures further aggravate price increases. In turn, these conditions weaken the market standing of domestic offerings. According to Rante and Wakarmamu (2024), inflation significantly and positively influences the JCI. This finding indicates that higher inflation often leads to increased firm sales and profits, which in turn supports larger dividend payouts and appeals to investors looking for capital appreciation. However, research by Hidayat, Purwanda and Hadijah (2024) reveals that while inflation moves in one direction relative to economic growth, its effect lacks statistical significance. Thus, an uptick in inflation fails to produce a meaningful boost to Indonesia's economic performance.

Rising inflation can be traced to a range of causes, including the state of political stability and the degree of price variation. The government has made continuous attempts to apply steady policies for containing inflation, but institutional deficiencies across many bodies obstruct proper enforcement and render the task increasingly challenging. Political and institutional determinants affect inflation differently depending on the country, with Indonesia facing a stronger influence than other Asian economies. Inflation persistence and the output gap are also critical drivers. Because inflation expectations are still largely shaped by past trends, an indication of adaptive behavior, Indonesian inflation remains markedly persistent. Global oil price disturbances, fuel cost hikes, depreciation and instability in the rupiah exchange rate, and minimum wage rises that outpace inflation all feed into expectation formation through cost-push or supply-side shocks. An increasing output gap likewise adds to inflationary momentum, with a more substantial effect observed in Indonesia relative to elsewhere.

2.2. Debt-to-Equity Ratio (DER)

A critical tool for analyzing a firm's capital structure and indebtedness is the Debt-to-Equity Ratio (DER). According to Astuti et al. (2021) DER is calculated as the proportion of total debt to total equity. Saksono et al. (2024) maintain that keeping solvency at an optimal level is a strategic way to boost enterprise value. When a company demonstrates its ability to handle upcoming financial obligations, the market often responds favorably due to sound debt governance.

As a key metric in financial statement interpretation, the Debt-to-Equity Ratio (DER) reflects both the level of creditor protection and the share of financing obtained from debt as opposed to equity. This ratio additionally helps evaluate the balance between funds advanced by creditors and those provided by owners. Raspati and Welas (2021) assert that a higher DER indicates stronger dependence on debt financing. Investors may find a high DER attractive, as it often implies the company is involved in major initiatives needing substantial funding. Such conditions can generate opportunities for increased returns for both the firm and its investors. Hence, a high DER demonstrates the company's strategic choice of debt over equity for long-term financing. When the projects funded exhibit solid growth potential, this positive signal can motivate investors to commit capital.

A company with a high DER relies more extensively on debt financing for expansion, which raises its financial exposure and may shape both investor sentiment and stock valuation, as noted by Alzubi and Bani-Hani (2021). Ardila et al. (2020) report that capital structure, profitability, and corporate growth significantly and positively affect capital gains. Since DER is commonly used to measure capital structure, a larger DER is linked to greater capital gains.

2.3. Price-Earnings Ratio (PER)

As a valuation indicator, the Price-Earnings Ratio (PER) compares the market price per share with the corresponding earnings per share (EPS). This ratio reveals the multiple of profits that investors are willing to exchange for a single company share. Thus, PER helps evaluate if a stock is priced at a discount, indicating undervaluation, or at a premium, suggesting overvaluation, in light of its profit-producing capacity (Asmedi et al., 2024). The PER not only serves as a current measure of valuation but also captures historical price patterns and offers insight into a firm's prospective valuation trajectory. According to Asmedi et al. (2024), the ratio exerts a considerable impact on company value. Furthermore, it is viewed as a practical forecasting instrument for expected stock gains, with a significant and positive linkage.

A high PER generally aligns with a high stock price, which can reflect strong corporate value. In capital markets, companies exhibiting these characteristics are often associated with “blue-chip” stocks. Siska et al. (2024) add that a high PER reflects market expectations regarding a company's growth prospects and future earnings increases. Their research findings indicate that the PER has a positive and significant impact on stock prices. In line with these observations, Mahardika (2025) finds that the PER positively and significantly influences equity returns. Accordingly, an upward movement in the PER tends to accompany rising stock returns within the industry analyzed. These circumstances note that companies boasting high PERs draw greater investor interest, as the ratio reflects market belief in the firm's future growth capacity, despite the potential need for heavy funding or investment.

2.4. TATO

TATO reflects the efficiency and intensity with which company management utilizes all assets, whether fixed or current, to sustain operations and generate sales growth. The quicker these assets are turned over to raise sales, the stronger the resulting effect on revenue. Layli and Firmansyah (2025) explain that the return on assets value indicates a linkage between asset returns and profit growth, so that rising asset returns lead to higher profit growth, while declining returns produce the opposite outcome. According to Anggriani et al. (2021) and Priantoro et al. (2024), TATO shows a significant positive effect on stock prices. Similarly, Putri and Triyonowati (2024) find that TATO significantly boosts stock returns. Patin et al. (2020) provide evidence that the TATO ratio positively affects stock returns across both immediate and extended timeframes.

2.5. Framework of Thinking

This framework proposes that fundamental ratios (DER, PER, TATO) positively drive capital gains, while inflation influences capital gains via its effect on stock prices and returns.

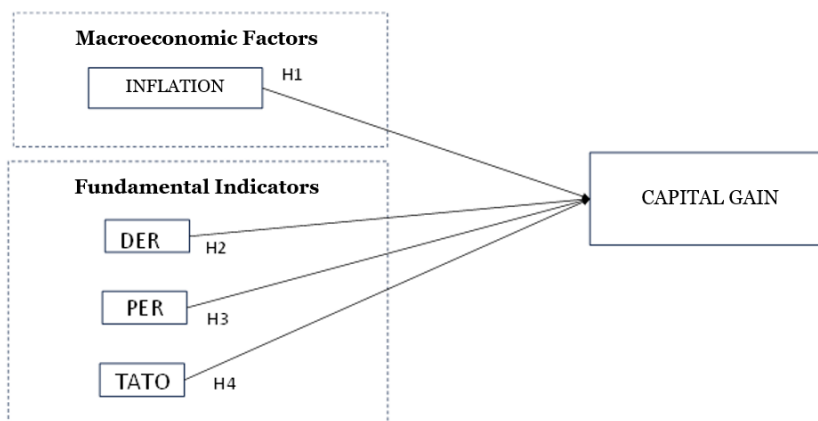


Figure 1. Framework of Thinking
Source: Authors' compilation (2026)

The research framework presented in Figure 1 illustrates the relationship between the macroeconomic factor of inflation and fundamental indicators consisting of the Debt to Equity Ratio (DER), Price to Earnings Ratio (PER), and Total Asset Turnover (TATO) on capital gain. Based on this framework, inflation is assumed to have a relationship with capital gain through changes in macroeconomic conditions, while DER, PER, and TATO represent the company's fundamental conditions that may be related to the acquisition of capital gain. The relationships between variables and the direction of the research hypotheses as formulated in H1 through H4 are visually shown in Figure 1.

2.6. Hypotheses development

According to figure 1. The hypothesis of the following research are:

High inflation raises price levels and squeezes corporate earnings, thereby lowering the likelihood of strong stock performance. Capital gains are likely to be adversely affected by inflation, with higher inflation rates corresponding to diminished gains. This pattern aligns with the research outcomes of Irwansyah et al. (2014).

H1: There is a Substantial Negative Correlation Between Inflation and Capital Gain

A significant influence on capital gains may arise from the Debt-to-Equity Ratio (DER). When DER is elevated, it signals that the firm relies heavily on borrowed funds or outside financing within its capital structure to support development, scaling, or corporate restructuring. Hence, an upward movement in DER is linked to higher capital gains.

H2: There is a Substantial Positive Correlation Between DER and Capital Gain

A significant effect on capital gains may come from the Price Earnings Ratio (PER). An upward movement in PER elevates stock returns, thereby contributing to increased capital gains.

H3: There is a Substantial Positive Correlation Between PER and Capital Gain

A substantial positive effect on capital gains may arise from Total Asset Turnover (TATO). Increased returns are associated with higher capital gains, and improved asset turnover boosts those returns, thereby contributing to greater capital gains. These outcomes are consistent with the research of Layli and Firmansyah (2025).

H4: There is a Substantial Positive Correlation Between TATO and Capital Gain

3. Methods

This study employs a quantitative approach utilizing descriptive and verificative methods, applied to a specific population via structured instruments (Sugiyono, 2018). The analysis examines the relationships between variables and tests hypotheses formulated based on existing theory and prior evidence. The sample was selected using a purposive sampling technique regarding quarterly financial ratio data, comprising 10 telecommunications companies listed on the Indonesia Stock Exchange (IDX) during the 2020-2025 period. The sample includes companies with the following stock ticker symbols: TLKM, EXCL, ISAT, TBIG, BALI, TOWR, KBLV, JAST, IBST, and LINK. The dataset consists of 240 quarterly observations. These companies' representative of big Cellular Operator in Indonesia and representatives of tower infrastructure companies and telecommunications and internet service providers in Indonesia.

Panel data regression serves as the analytical tool for investigating the effects of fundamental indicators and macroeconomic factors on capital gains. Through this method, the study estimates the size and sign of each variable's contribution to capital gains. The Chow, Lagrange Multiplier, and Hausman tests are applied to determine model specification and significance, guiding the choice of the most suitable estimation approach for the pooled cross-

sectional and time-series dataset. Additionally, classical assumption checks are carried out to confirm that the final model is reliable, free from bias, and consistent.

3.1. Research Variable

The research variables used consist of inflation, Debt to Equity Ratio (DER), Price to Earnings Ratio (PER), Total Asset Turnover (TATO), and capital gain. Inflation describes a continuous and widespread increase in the prices of goods and services within a certain period. DER shows the proportion of company financing sourced from debt compared to capital provided by shareholders. Meanwhile, PER is used as a stock valuation indicator to assess the relationship between stock price and the company's earnings value.

Furthermore, TATO is used to measure the company's effectiveness in utilizing all owned assets to generate sales or revenue. Meanwhile, capital gain is the profit obtained by investors when the selling price of an investment asset is higher than its purchase price. These five variables are used to describe the macroeconomic factor, financing structure, valuation, asset use efficiency, and investment gain related to the company's stock price performance. The variable of the following research is shown on table 1.

Table 1. Research Variable

Definition	Formula
1. Inflation is defined as a sustained and widespread rise in the prices of goods and services across a given timeframe.	
2. DER shows the proportion of a company's financing that is sourced from debt in relation to funds provided by shareholders.	$DER = \frac{\text{Total Liabilities}}{\text{Shareholder's Equity}}$
3. PER serves as a stock valuation tool to assess whether a share price is priced below or above its fair value.	$PER = \frac{\text{Market Price Per Share}}{\text{EPS (Earning Per Share)}}$
4. Total Asset Turnover (TATO) measures how effectively a company deploys its assets to produce sales or income.	$TATO = \frac{\text{Net Sales}}{\text{Total Aset}}$
5. Capital gain is the profit realized when the selling price of an investment asset exceeds its purchase price.	$\text{Capital Gain} = \frac{\text{Current Prices} - \text{Original Prices}}{\text{Original Price}} \times 100\%$

Source: Authors' compilation (2026)

4. Results and Discussion

4.1. Research Results

4.1.1. Statistical Result

Table 2. Statistical Results

	Capital Gain	TATO	DER	PER	Inflation
Mean	1.341333	0.196567	1.810417	40.23175	2.617083
Median	-1.200000	0.140000	1.460000	23.64500	2.365000
Maximum	51.70000	0.570000	3.930000	204.5300	5.550000
Minimum	-35.72000	0.015400	0.460000	-26.99000	0.570000
Std Dev.	22.73224	0.160349	1.087235	57.76103	1.277273
Observation	240	240	240	240	240

Source: Processed data (2026)

According to Table 2, TATO averaged 0.20 for 2020–2025, with a standard deviation of 0.16, indicating relatively consistent values around the mean. The median was 0.14, ranging from 0.02 to 0.57; TOWR and JAST recorded the highest values, while KBLV posted the lowest in 2025. The debt ratio averaged 1.81, with a standard deviation of 1.09, showing values concentrated near the mean. The median was 1.46, ranging from 0.46 to 3.93; KBLV peaked in Q4 2021 and bottomed in Q1 2022.

For PER, the mean of 40.23 exceeded the standard deviation of 57.76, reflecting wide dispersion. The median was 23.65, ranging from -26.99 to 204.53. ISAT (2022), KBLV and BALI (2020), JAST (2024), and IBST (2020–2023) recorded the highest values, while ISAT (2020), KBLV (2025), LINK (2023), and JAST (2020–2023) recorded the lowest. Inflation averaged 2.62, with a standard deviation of 1.28, indicating stable, concentrated values. The median was 2.37, peaking at 5.55 in Q4 2022 and bottoming at 0.57 in Q1 2025.

Capital gains showed the widest dispersion, with a mean of 1.34 far below the standard deviation of 22.73, a median of -1.20, and a range from -35.72 to 51.70, reflecting substantial fluctuation across the dataset.

4.1.2. Estimation Methods

A. Chow Test

To select the appropriate model, the Chow test (likelihood ratio test) compares the Fixed Effects Model (FEM) against the Common Effects Model (CEM). CEM assumes coefficients are constant across individuals and time, while FEM accounts for heterogeneity among entities. The choice is determined by examining the significance of the FEM's F-statistic.

Table 3. Chow Test Results

Effects Test	Statistic	d.f.	Prob.
Cross-section F	0.651775	(9,226)	0.7518
Cross-section Chi-square	6.149886	9	0.7248

Source: Processed data (2026)

The Chow test hypotheses are defined as H_0 favoring the Common Effects Model and H_1 favoring the Fixed Effects Model. As shown in Table 3, the probability equals 0.7518. Given that the cross-section F probability is greater than 0.05, the null hypothesis cannot be rejected, which implies that the Common Effects Model (CEM) should be employed.

B. Hausman Test

The Hausman test is used to choose between the Random Effects Model (REM) and the Fixed Effects Model (FEM) by checking for correlation between the error term and the regressors, with the null hypothesis assuming no correlation. Here, H_0 represents REM and H_1 represents FEM. If the Hausman statistic exceeds the critical value, H_0 is rejected and FEM is preferred; if it is lower, REM is chosen instead.

Table 4. Hausman Test Results

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.000000	4	1.0000

Source: Processed data (2026)

As shown in table 4. the cross section random probability associated with the Hausman Test result is greater than 0.05. This result leads to the selection of Random Effect Model as the appropriate specification.

C. Lagrange Multiplier

The Lagrange Multiplier (LM) test is used to choose between the Common Effects Model (CEM) and the Random Effects Model (REM), based on the Chi-square probability value at the 0.05 significance level. H_0 posits that CEM is appropriate, while H_1 posits that REM is appropriate. If the p-value is below 0.05, H_0 is rejected and REM is selected; if it exceeds 0.05, CEM is retained.

Table 5. Lagrange Multiplier Test Results

Test Hypothesis	Cross-section	Time	Both
Breusch-Pagan	1.626132 (0.2022)	3.527944 (0.0603)	5.154076 (0.0232)
Honda	-1.275199 (0.8989)	1.878282 (0.0302)	0.426444 (0.3349)
King-Wu	-1.275199 (0.8989)	1.878282 (0.0302)	-0.084993 (0.5339)
Standardized Honda	-0.899750 (0.8159)	2.265408 (0.0117)	-3.606774 (0.9998)
Standardized King-Wu	-0.899750 (0.8159)	2.265408 (0.0117)	-3.897152 (1.0000)
Gourieroux, et al.	--	--	3.527944 (0.0730)

Source: Processed data (2026)

As shown in Table 5, the Breusch-Pagan probability value for both the cross-section and time series is 0.0232; this value is less than 0.05. Consequently, the null hypothesis is rejected, confirming that the Random Effects Model (REM) is the preferred choice.

4.1.3. Classical Assumption Test

A. Multicollinearity test

Used in panel data regression, the multicollinearity test identifies high intercorrelations among predictors. Such overlap reduces coefficient stability, raises standard errors, weakens t-values, and complicates effect isolation. The findings are presented in the following summary.

Table 6. Multicollinearity Test Results

	INFLATION	DER	PER	TATO	CAPITAL_GAIN
INFLATION	1.000000	-0.102420	0.014403	0.009368	-0.202091
DER	-0.102420	1.000000	-0.003782	-0.221914	0.159170
PER	0.014403	-0.003782	1.000000	-0.332096	0.118464
TATO	0.009368	-0.221914	-0.332096	1.000000	0.103474
CAPITAL_GAIN	-0.202091	0.159170	0.118464	0.103474	1.000000

Source: Processed data (2026)

As reported in Table 6, correlation coefficients for all variables fall below 0.85, signaling no multicollinearity issue. A heteroskedasticity test was not conducted, as the chosen specification is the Random Effects Model (REM), which does not require this diagnostic (Napitupulu et al., 2021). The REM (using GLS/FGLS) already accounts for inter-observation correlation and autocorrelation issues typical of panel data; therefore, the classical autocorrelation test need not be repeated. Unlike OLS, the REM does not require an autocorrelation test because the estimator employed already adjusts for the panel error structure (e.g., via FGLS or a robust approach).

4.1.4. Equation Regression

Table 7. Equation Regression

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-5.915337	5.123539	-1.154541	0.2495
INFLATION	-3.339379	1.107232	-3.015970	0.0028
DER	3.918055	1.338498	2.927204	0.0038
PER	0.075478	0.025911	2.913002	0.0039
TATO	29.84313	9.572123	3.117713	0.0020

Source: Processed data (2026)

$$\text{CAPITAL_GAIN} = -5.91533718838 + 29.84313276 \cdot \text{TATO} + 3.9180548121 \cdot \text{DER} + 0.0754777527954 \cdot \text{PER} - 3.33937906353 \cdot \text{INFLASI} + [\text{CX}=\text{R}]$$

The intercept of -5.9153 implies that capital gains would be roughly 5.89% below baseline when all predictors are zero. DER shows a positive coefficient of 3.9181, meaning a one-unit increase in leverage raises capital gains by about 3.91%, all else fixed. PER also has a positive effect, with a coefficient of 0.0755, corresponding to a 0.07% rise in capital gains per unit increase in PER. TATO exhibits the largest positive impact, with a coefficient of 29.84313, indicating that a one-unit rise in asset turnover boosts capital gains by roughly 29%, highlighting the strong role of asset efficiency. In contrast, inflation carries a negative coefficient of -3.3394 , suggesting that a 1 percentage point increase in inflation reduces capital gains by approximately 3.35%, underscoring its adverse effect.

4.1.5. T-Test

According to table 7, inflation, DER, PER, and TATO each have a statistically significant relationship with capital gains. Inflation ($t = 3.0159$, $p = 0.0028$) supports H11, rejecting H10. DER ($t = 2.9272$, $p = 0.0038$) confirms H21, rejecting H20. PER ($t = 2.9130$, $p = 0.0039$) validates H31, rejecting H30. TATO ($t = 3.1177$, $p = 0.0020$) upholds H41, rejecting H40. These findings indicate that leverage, valuation, asset turnover, and inflation all significantly influence capital gains in Indonesian telecom firms.

4.1.6. F Test

To determine if the independent variables together have a statistically significant impact on capital gains, the F-test is applied. Significance is established when the Prob(F-statistic) falls under 0.05. The null hypothesis (HS0) states no joint effect, while the alternative (HS1) proposes that inflation, DER, PER, and TATO simultaneously influence capital gains.

Table 8. F-Test Results

Effects Specification			
		S.D.	Rho
Cross-section random		0.000000	0.0000
Idiosyncratic random		21.74546	1.0000
Weighted Statistics			
R-squared	0.112247	Mean dependent var	1.341333
Adjusted R-squared	0.097137	S.D. dependent var	22.73224
S.E. of regression	21.59997	Sum squared resid	109641.3
F-statistic	7.428346	Durbin-Watson stat	2.296577
Prob(F-statistic)	0.000012		
Unweighted Statistics			
R-squared	0.112247	Mean dependent var	1.341333
Sum squared resid	109641.3	Durbin-Watson stat	2.296577

Source: Processed data (2026)

As shown in table 8, the F-statistic (7.428346) surpasses the critical value (2.642851), and the probability (0.000012) is less than 0.05. This leads to rejection of HS0 in favor of HS1, confirming that inflation, DER, PER, and TATO together have a significant joint effect on capital gains in the Indonesian telecom industry.

4.1.7. Coefficient Determination

Table 7 reports an adjusted R-squared of 0.097137, meaning that inflation, DER, PER, and TATO together explain about 9% of the variation in capital gains, while the remaining 91% is attributed to other factors. This figure compares favorably with prior studies, Ernawati and Ismail (2022) found 2.3%; Hamzah (2014) reported 4.5%, and; as well as Wahyuni and Djamaluddin (2016) obtained 4.4% for various fundamental indicators. Thus, the 9% explanatory power in this telecommunications sector study is notably higher.

When the panel data regression method is employed, the resulting coefficient of determination is not as high as that obtained using the multiple linear regression method. A study conducted by Irwansyah et al. (2014) which utilized multiple linear regression analysis, demonstrated that the inflation rate, time deposit interest rates, and foreign exchange rates significantly influenced the dependent variable (capital gain/loss), yielding a coefficient of determination of 69% (Irwansyah et al., 2014).

4.2. Discussion

4.2.1. The Influence of Inflation on Capital Gain

During periods of inflation, prices in the food and energy sectors tend to rise, whereas telecommunications rates generally remain stable; intense competition among operators has driven these rates lower. The telecommunications sector is also affected by inflationary pressures, notably through rising infrastructure costs. Developing network infrastructure such as 5G, requires significant capital, including the importation of hardware and chips; global inflation drives up the prices of these components. Energy and operational expenses are likewise impacted by inflation. Operating thousands of base transceiver stations (BTS)

requires substantial electricity, and rising energy prices can lead to a surge in corporate operating costs. The telecommunications sector is also affected regarding its workforce. Inflation drives up the national minimum wage, thereby increasing the operating costs borne by telecommunications companies.

Rising inflation drives up consumer and producer prices, often eroding corporate earnings. As a consequence, the equity returns available to investors may diminish. Inflation is widely regarded in the literature as a key macroeconomic determinant of stock prices and returns, with clear conceptual ties to capital gains. Consequently, analyses of investment returns (encompassing both capital gains and dividends) often incorporate inflation as a key explanatory variable.

Support for these findings comes from Indriatmika (2021) and Lucky (2018), who show that inflation negatively and significantly affects stock prices. Michelle and Chusnah (2023) further demonstrate that inflation is an important factor in the relationship between DER, earnings management, and stock returns. However, earlier studies are not unanimous; Sulastris and Suselo (2022) as well as Sopyan and Apriadi (2025) report a significant positive effect of inflation on stock prices. Nonetheless, the overall evidence leads to the conclusion that inflation negatively and significantly impacts capital gains, meaning that rising inflation tends to reduce realized gains. This aligns with previous work by Irwansyah et al. (2014).

4.2.2. The Influence of DER on Capital Gain

Because the telecom sector is highly capital intensive, it needs considerable financial resources to support growth, expansion, restructuring, and other strategic initiatives (Astuti et al., 2021). Infrastructure development in this sector constitutes a long-term investment. Companies in a rapid growth phase generally require additional external capital. Even when this capital is raised through debt, the market does not necessarily view it as a negative signal. In this sector, with proper debt management and a reasonable Debt-to-Equity Ratio (DER), capital gains can still increase.

Generally, a lower DER is viewed more positively by the market. Companies with low leverage tend to possess a more robust capital structure and are considered capable of meeting their long-term obligations. A higher DER indicates increased reliance on external borrowing to sustain business operations (Raspati & Welas, 2021). Companies with high leverage are often viewed negatively by the market because insufficient cash flow, or an inability to generate revenue and meet long-term obligations, can jeopardize corporate earnings or profits. Excessive leverage tends to suppress stock returns (Tua et al., 2025). Nonetheless, prudent debt management that generates higher profits can still drive capital gains upward. Companies that effectively employ leverage to finance growth and ongoing activities may sustain investor confidence, allowing capital gains to materialize despite an elevated DER.

Alzubi and Bani-Hani (2021) argue that firms may rely more heavily on debt to finance obligations related to tangible assets. Greater debt utilization can increase both the debt-to-equity ratio (DER) and the firm's overall level of leverage. Similarly, Saksono et al. (2024) suggest that the prudent and disciplined application of debt policy may generate a favorable response from the market. Accordingly, solvency-related indicators can become an important strategic consideration in efforts to improve firm value.

Raspati and Welas (2021) further note that a high DER is not necessarily perceived negatively by investors. Instead, it may signal that the company is undertaking substantial capital-intensive investments financed through debt. When such investments generate strong operating and financial performance, they can create benefits for both the firm and its shareholders through higher returns. Since capital gains result from changes in stock prices between periods, an increase in share price directly raises the capital gain earned by investors.

In this regard, a higher DER may contribute to stock-price appreciation when debt is used productively and is supported by positive investor expectations. Ayuni et al. (2025) found evidence that DER can positively affect stock prices, thereby increasing the potential for investors to obtain capital gains. This conclusion is supported by Ardila et al. (2020), who reported that capital structure, profitability, and firm growth jointly have a positive and significant effect on capital gains. Because their study used DER as a proxy for capital structure, the findings imply that higher leverage may be associated with greater capital gains.

4.2.3. The Influence of PER on capital Gain

The findings indicate that the Price Earnings Ratio (PER) has a significant effect on capital gains. Conceptually, stock returns are closely associated with capital gains, as capital gains constitute one component of the returns received by investors. In empirical analyses, investor returns whether derived from capital gains or dividends are often modeled as a function of PER. Since an increase in capital gains generally corresponds with an increase in stock returns, PER may indirectly influence capital gains through its effect on return performance.

Ferniawan et al. (2024) found that PER has a positive and significant effect on stock returns. This suggests that firms with higher PER values tend to generate higher returns, which may subsequently lead to greater capital gains. A high PER can reflect investors' optimistic expectations regarding the company's future earnings and dividend growth. It may also indicate that investors view the firm's earnings performance favorably and expect management to prioritize future dividend growth rather than retaining a substantial proportion of profits.

Stock prices also play a central role in the formation of capital gains because capital gains arise from changes in stock prices over a given period. Therefore, movements in stock prices are directly related to the magnitude of capital gains obtained by investors. In line with this argument, Munandar et al. (2024) and Siska et al. (2024) reported that PER has a positive relationship with stock prices. Similar evidence was also provided by Aprianti and Wahyuningsih (2022), who found a positive and statistically significant relationship between PER and stock prices. Consequently, an increase in PER may contribute to higher capital gains by encouraging an increase in stock prices.

4.2.4. The Influence of TATO on Capital Gain

Theoretically, stock return is directly linked to capital gains, as the returns received by investors can stem from either share price appreciation or dividend distributions. In empirical studies, Total Asset Turnover (TATO) is frequently employed as a variable hypothesized to influence these returns. An increase in capital gains generally aligns with rising stock returns and share prices, given that capital gains represent the difference or change in share value between periods.

Research findings indicate that TATO has a positive and statistically significant effect on capital gains. This ratio reflects management's ability to optimize current and fixed assets in support of operational activities and sales generation. A high TATO level demonstrates a company's effectiveness in generating sales (Layli & Firmansyah, 2025) and reflects the capacity to derive greater profit from generated revenue. Furthermore, such increased profitability can enhance investor valuation of the company and drive up share prices (Kartawinata et al., 2021)

Azzahra and Wijaya (2026) found that TATO has a positive and significant impact on share prices. These findings indicate that the higher a company's asset turnover, the greater the potential for increasing firm value and the capital gains realized by investors. A high TATO

suggests that company assets are utilized more efficiently to generate sales, thereby bolstering investor confidence and increasing demand for the company's stock. Ultimately, this dynamic has the potential to drive share prices upward. These results are consistent with studies by Abror and Marsono (2025); Anggriani et al. (2021); Priantoro et al. (2024); as well as Putri and Triyonowati (2024), all of which also identified a positive relationship between TATO and share prices.

Additionally, total asset turnover, net profit, and profitability levels collectively play a significant role in driving sales growth. Companies capable of utilizing and turning over assets more rapidly tend to possess a greater capacity to generate revenue, profits, and higher stock returns. Consequently, asset utilization efficiency as reflected in the Total Asset Turnover (TATO) ratio can enhance a company's prospects for generating capital gains. Findings by Patin et al. (2020) support this argument, demonstrating that TATO exerts a positive influence on equity performance in both the short and long term.

4.2.5. Stocks in Telecommunication

The telecommunications sector appeals to investors due to its role in digitalization, dividend potential, and the growth of data services. Share prices are influenced by ARPU growth, technological upgrades, market technical trends, customer retention via integrated services, and the valuation of tower and data center assets.

Debt management is critical, as telecommunications companies require substantial funding for network expansion, spectrum licenses, and infrastructure. Companies must maintain sustainable debt levels, balance domestic and foreign currency borrowing, manage repayment maturities, and ensure that operating cash flow can meet debt obligations, particularly during periods of high inflation and interest rates.

To address inflation, telecommunications companies prioritize cost efficiency through infrastructure sharing, network automation, selective investment, service bundling, and financial hedging against exchange rate volatility. Network-sharing agreements, including RAN and MOCN models, can reduce capital expenditure (Capex) and operating expenditure (Opex) while expanding coverage and supporting 5G development.

Government policy supports digital transformation through the 2025-2029 National Medium-Term Development Plan (RPJMN), targeting broader high-speed internet coverage, 4G expansion in underserved areas, increased household broadband access, 5G deployment, new spectrum allocation, and AI readiness. The government also regulates frequency fees, operating licenses, OTT-telecom partnerships, business competition, data protection, taxation, and domestic server requirements to foster a healthy and sovereign digital ecosystem.

5. Conclusion

This study investigates the impact of activity, solvency, and market-based indicators, as well as macroeconomic factors, on capital gains within the telecommunications industry from 2020 to 2025. Results reveal that Total Asset Turnover (TATO) positively and significantly affects capital gains, as improved asset turnover signals stronger operational effectiveness, thereby enhancing investor confidence and potentially raising gains. The Debt-to-Equity Ratio (DER) also demonstrates a positive and significant relationship; although elevated DER often implies heightened financial exposure, investors in this context seem to regard debt as an effective means of supporting expansion and operations, so that rising DER is associated with higher capital gains.

Similarly, the Price-Earnings Ratio (PER) has a positive and significant impact on capital gains. A depressed PER may indicate either undervaluation or weak profit generation, which can hinder stock price appreciation, while an uptick in PER signals growing investor confidence in earnings prospects and tends to lift capital gains. In contrast, inflation exerts a negative and significant effect, since high inflation disrupts economic conditions, raises input costs, reduces profit margins, and dampens investor enthusiasm. Taken together, TATO, DER, PER, and inflation significantly influence capital gains, with a coefficient of determination of 9%, indicating that these four variables jointly explain 9% of the variation, leaving 91% attributable to external influences. The result regarding the coefficient of determination represents a limitation of this study. To increase the coefficient of determination, factors influencing capital gains can be included in the analysis as additional variables.

This study contributes theoretically by identifying key factors influencing capital gains in Indonesia's telecommunications sector, while also pointing to opportunities for future research to incorporate additional variables and strengthen the model's explanatory power. Practically, the findings offer companies useful insights into financial performance, funding structure management, and corporate value enhancement, while helping them anticipate how shifting macroeconomic conditions affect stock prices. For investors, the results provide a basis for investment decisions grounded in fundamental and macroeconomic indicators, supporting more objective and efficient investment analysis, portfolio strategy formulation, and stock prospect evaluation.

6. References

- Abror, M. U., & Marsono, A. D. (2025). The Effect of Tato and DER on Stock Prices, with ROA as a Mediator, on the Jakarta Islamic Index. *Journal Research of Social Science, Economics, and Management*, 5(2), 3065–3077. <https://doi.org/10.59141/jrssem.v5i2.995>
- Alzubi, K., & Bani-Hani, A. (2021). Determinants of debt-to-equity and its impact on the performance of industrial companies listed on Amman Stock Exchange. *Journal of Governance and Regulation*, 10(4, special issue), 353–364. <https://doi.org/10.22495/jgrv10i4siart15>
- Anggriani, N. W. O., Gama, A. W. S., & Astiti, N. P. Y. (2021). Pengaruh Total Assets Turn Over, Debt To Equity Ratio, Price Earning Ratio Terhadap Harga Saham Pada Perusahaan Transportasi Yang Terdaftar Di Bursa Efek Indonesia. *VALUES*, 2(2), 287–298. <https://e-journal.unmas.ac.id/index.php/value/article/view/2675>
- Aprianti, E., & Wahyuningsih, D. (2022). Implications Of Return On Asset (Roa), Earning Per Share (Eps), Price Earning Ratio (Per), And Debt To Equity Ratio (Der) To Stock Price. *AKSELERASI: Jurnal Ilmiah Nasional*, 4(1), 93–105. <https://doi.org/10.54783/jin.v4i1.535>
- Ardila, N., Abubakar, E., & Sirojuzilam. (2020). Analysis of the Effect of Capital Structure, Profitability, Liquidity and Growth on Capital Gain Stocks with Inflation as A Moderating Variable in Construction Companies Listed on The Indonesia Stock Exchange. *International Journal of Research and Review*, 7(6), 72–78. https://www.ijrrjournal.com/IJRR_Vol.7_Issue.6_June2020/IJRR0011.pdf
- Asmedi, S., Sulaeman, M., & Suwali, S. (2024). Penetapan Earning Per Share (Eps), Price Earning Ratio (Per), Dan Dividend Payout Ratio (Dpr) Sebagai Penentu Nilai Perusahaan. *Jurnal Bening*, 11(2), 252–265. <https://doi.org/10.33373/bening.v11i2.6422>
- Astuti, Sembiring, L. D., Supitriyani, Azwar, K., & Susanti, E. (2021). *Analisis Laporan Keuangan*. Penerbit Media Sains Indonesia.

- Ayuni, K. P., Rastryana, U., & Irawan, R. L. (2025). Pengaruh Debt To Equity Ratio (DER) dan Return On Asset (ROA) terhadap Harga Saham pada Sub Sektor Jasa Kesehatan yang Terdaftar di Bursa Efek Indonesia Pada Tahun 2020-2024. *Jurnal Semesta Ilmu Manajemen Dan Ekonomi*, 2(1), 1820–1835. <https://doi.org/10.71417/j-sime.v2i1.960>
- Azzahra, I. M., & Wijaya, T. (2026). Pengaruh Total Asset Turnover (Tato), Current Ratio (Cr), Net Profit Margin (Npm), Price To Earning Ratio (Per), Debt To Asset Ratio (Dar) Terhadap Harga Saham Pada Sektor Transportasi Dan Logistik Periode 2020-2024. *Journal of Innovative and Creativity (Joecy)*, 6(1), 11737–11750. <https://doi.org/10.31004/joecy.v6i1.8225>
- Campbell, K., Diffley, J., Flanagan, B., Morelli, B., O'Neil, B., & Sideco, F. (2017). *The 5G economy: How 5G technology will contribute to the global economy*. Qualcomm. <https://cdn.ihs.com/www/pdf/IHS-Technology-5G-Economic-Impact-Study.pdf>
- Ernawati, N., & Ismail, B. (2022). Analisis Profitabilitas Terhadap Capital Gain (Perusahaan Terdaftar Di Bei). *Ekono Insentif*, 16(1), 40–52. <https://doi.org/10.36787/jei.v16i1.720>
- Ferniawan, M. F., Kusumawati, A., & Madein, A. (2024). The Influence of Earnings Per Share (EPS), Price Earnings Ratio (PER), Price to Book Value (PBV), And Debt Equity Ratio (DER) On The Stock Return. *Akrual: Jurnal Bisnis Dan Akuntansi Kontemporer*, 17(1), 114–130. <https://doi.org/10.26487/akrual.v17i01.32073>
- Hamzah, A. (2014). Analisa Rasio Likuiditas, Profitabilitas, Aktivitas dan Solvabilitas terhadap Capital Gains dan Dividen pada Perusahaan Manufaktur di Bursa Efek Jakarta. *Jurnal Akuntansi*, 6(1), 22–31. <https://doi.org/10.28932/jam.v6i1.337>
- Hidayat, A. M., Purwanda, E., & Hadijah, H. S. (2024). Impact Of Government Spending And Foreign Investment On Exports, Imports, And Economic Growth In Indonesia. *IJEED (International Journal of Entrepreneurship and Business Development)*, 7(1), 148–156. <https://doi.org/10.29138/ijebd.v7i1.2543>
- Hidayat, A. M., Purwanda, E., Hadijah, H. S., & Sodik, G. (2024). Impact of exchange rates, Inflation, foreign direct investment, government spending, and economic openness on exports, imports, and economic growth in Indonesia. *Journal of Infrastructure Policy and Development*, 8(6), 3270. <https://doi.org/10.24294/jipd.v8i6.3270>
- Indriatmika, R. D. (2021). Pengaruh Variabel Makro Ekonomi Terhadap Return Saham Kelompok Sektoral yang Terdaftar di Bursa Efek Indonesia. *Jurnal Ilmu Manajemen Dan Bisnis*, 12(2), 201–214. <https://doi.org/10.17509/jimb.v12i2.37102>
- Irwansyah, F., Zulbahridar, & Idroes, R. (2014). Pengaruh Tingkat Inflasi, Tingkat Bunga Deposito Dan Kurs Valuta Asing terhadap Capital Gain / Loss Pada Perusahaan Real Estate dan Property Di Bursa Efek Indonesia. *JOM Fekon: Jurnal Online Mahasiswa Fakultas Ekonomi*, 1(2), 1–15. <https://jom.unri.ac.id/index.php/JOMFEKON/article/view/4711>
- Kartawinata, B. R., Heryuda, R., Pradana, M., & Akbar, A. (2021). Influence Of Return On Assets (Roa) And Earning Per Share (Eps) To Share Price(Study On Property And Real Estate Companies Listed On Idx Period 2010 – 2014). In *Proceedings of the International Conference on Industrial Engineering and Operations Management*. IEOM Society International. <https://doi.org/10.46254/ap01.20210088>
- Kartawinata, B. R., Pradana, M., Akbar, A., Trenggana, A. F. M., & Cahyaningrum, S. D. (2020). The Effect of Easy Perception and Risk of Users of Financial Technology Services in SMEs of Bandung, Indonesia. *Proceedings of the 2nd African International Conference on Industrial Engineering and Operations Management*, 997–1007. <https://index.ieomsociety.org/index.cfm/item/47440>
- Kartawinata, B. R., Wafa, A. A., Kurnianingrum, D., Fakhri, M., Wardhana, A., & Joviano, R. (2024). The impact of digital marketing and brand trust on e-wallet adoption (study on ShopeePay Indonesia). *International Conference on Medical Imaging, Electronic Imaging, Information Technologies, and Sensors (MIEITS 2024)*. <https://doi.org/10.1117/12.3032488>

- Kustina, L., Safitri, O., & Anwar, S. (2019). Kebijakan Dividen Dan Capital Gain: Pengaruhnya Terhadap Harga Saham. *Jurnal Investasi*, 5(1), 24–37. <https://doi.org/10.31943/investasi.v5i1.16>
- Layli, M., & Firmansyah, F. (2025). A Total Asset Turn Over, Net Profit, and Profitability on Sales Growth. *Journal of Economics and Social Sciences (JESS)*, 4(1), 51–59. <https://doi.org/10.59525/jess.v4i1.649>
- Lucky, W. H. (2018). *Pengaruh Variabel Makro Ekonomi terhadap Harga Saham pada Sektor Perbankan*. STIESIA Surabaya.
- Mahardika, M. H. (2025). Analysis The Impact of Bank Fundamental Indicators (ROA, NPM, DER, EPS, PER, CAR, NIM, BOPO, AND LDR) on the Stock Returns of Indonesian State-Owned Banks for the Period. *American Journal of Economic and Management Business (AJEMB)*, 4(1), 67–79. <https://doi.org/10.58631/ajemb.v4i1.164>
- Michelle, H., & Chusnah, F. N. (2023). Inflation as moderating effect of financial performance, earnings management, and firm value on stock return. *Journal of Public Auditing and Financial Management*, 3(1), 39–54. <https://doi.org/10.36407/jpafm.v3i1.1582>
- Munandar, A., Romli, H., Aravik, H., & Halomoan Simatupang, E. T. S. (2024). The Effect of Financial Performance On The Price Earning Ratio (PER) And Its Implications For Stock Prices (Study On Companies Listed On The Idx In 2018–2021). *Islamic Banking : Jurnal Pemikiran Dan Pengembangan Perbankan Syariah*, 9(2), 237–252. <https://doi.org/10.36908/isbank.v9i2.1061>
- Napitupulu, R. B., Simanjuntak, T. P., Hutabarat, L., Damanik, H., Harianja, H., Sirait, R. T. M., & Tobing, C. E. R. L. (2021). *Penelitian Bisnis : Teknik dan Analisa Data dengan SPSS - STATA - EVIEWS*. Madenatera, 1.
- Patin, J.-C., Rahman, M., & Mustafa, M. (2020). Impact of Total Asset Turnover Ratios on Equity Returns: Dynamic Panel Data Analyses. *Journal of Accounting, Business and Management (JABM)*, 27(1), 19. <https://doi.org/10.31966/jabminternational.v27i1.559>
- Priantoro, W., Ratih, N., & Kusumaningarti, M. (2024). Pengaruh Return On Equity (ROE), Total Asset Turnover (TATO) dan Nilai Tukar Rupiah terhadap Return Saham (Studi Kasus Pada Perusahaan Sektor Pertanian Yang Terdaftar di Bursa Efek Indonesia Periode 2018-2021). *Jurnal Ilmiah Wahana Pendidikan*, 10(8), 1012–1021. <https://doi.org/10.5281/zenodo.11159313>
- Putri, A. R., & Triyonowati, T. (2024). Pengaruh ROA, EPS, dan TATO Terhadap Return Saham pada Perusahaan Subsektor Pulp Dan Kertas di BEI. *Jurnal Ilmu Dan Riset Manajemen (JIRM)*, 13(3). <https://jurnalmahasiswa.stiesia.ac.id/index.php/jirm/article/view/5842>
- Rante, E., & Wakarmamu, C. M. (2024). Analisis Pengaruh Inflasi, Suku Bunga Bank Indonesia Dan Nilai Tukar Terhadap Indeks Harga Saham Gabungan Di Bursa Efek Indonesia Periode 2014-2023. *Jurnal Ilmiah Nusantara*, 1(3), 105–119. <https://doi.org/10.61722/jinu.v1i3.2415>
- Raspati, M. W., & Welas, W. (2021). Pengaruh Return On Assets, Current Ratio, Debt To Equity Ratio Dan Dividend Payout Ratio Terhadap Harga Saham (Studi Empiris pada Perusahaan yang Tergabung Dalam Indeks LQ45 Di Bursa Efek Indonesia Periode 2016 – 2019). *Jurnal Akuntansi Dan Keuangan*, 10(1), 37–54. <https://doi.org/10.36080/jak.v10i1.1429>
- Rosman, M., & Yudanto, A. A. (2022). Analisis Event Study antarsektor di Bursa Efek Indonesia terhadap Peristiwa Pandemi Covid-19. *INOBIIS: Jurnal Inovasi Bisnis Dan Manajemen Indonesia*, 5(4), 581–586. <https://doi.org/10.31842/jurnalinobis.v5i4.252>
- Saksono, H. T., Hidayat, A. M., & Firmialy, S. D. (2024). How the Macroeconomic and Financial Structure Affects the Firm Value of a Large Telecommunication Company in Indonesia. *International Journal of Accounting & Finance in Asia Pasific*, 7(3), 446–460. <https://doi.org/10.32535/ijafap.v7i3.3493>
- Sanoyo, A. M., Hidayat, A. M., & Firmialy, S. D. (2024). Impact Of The Russia-Ukraine Conflict

- On Indonesian Commodity Stocks: A Systematic Literature Review. *Journal of Humanities Social Sciences And Business (JHSSB)*, 3(4), 1036–1049. <https://doi.org/10.55047/jhssb.v3i4.1307>
- Siska, S., Mas'ud, M., & Amiruddin, A. (2024). Pengaruh Earnings Per Share, Price Earning Ratio, Price To Book Value, Dan Debt Equity Ratio Terhadap Harga Saham Sektor Industri Barang Konsumsi Pada Bursa Efek Indonesia. *SEIKO: Journal of Management & Business*, 7(1), 665–679. <https://doi.org/10.37531/sejaman.v7i1.6433>
- Sopyan, F. M., & Apriadi, D. (2025). Pengaruh Suku Bunga Dan Inflasi Terhadap Harga Saham (Studi Pada Pt Telekomunikasi Indonesia Tbk). *Jurnal Mirai Management*, 10(1), 605–614. <https://doi.org/10.37531/mirai.v10i1.9017>
- Sugiyono. (2018). *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. Alfabeta.
- Sulastris, T., & Suselo, D. (2022). Pengaruh Inflasi, Suku Bunga Dan Nilai Tukar Terhadap Harga Saham PT. Telekomunikasi Indonesia Tbk. *JPEKA: Jurnal Pendidikan Ekonomi, Manajemen Dan Keuangan*, 6(1), 29–40. <https://doi.org/10.26740/jpeka.v6n1.p29-40>
- Tua, S. M., Kusumawardhani, R., & Damanik, J. M. (2025). Analysis of the Impact of ROE, EPS, CR, and DER Ratio on Stock Return in Automotive Sector Companies Listed on the IDX. *Indonesian Journal of Economics, Business, Accounting, and Management (IJEBAAM)*, 3(4), 1–14. <https://doi.org/10.63901/ijebam.v3i4.129>
- Wahyuni, I., & Djamaluddin, S. (2016). Pengaruh Kinerja Keuangan Terhadap Capital Gain Pada Industri Properti Di Bursa Efek Indonesia (Periode Tahun 2008 – 2013). *Jurnal Ilmiah Manajemen Dan Bisnis*, 2(1), 531–548. <https://doi.org/10.22441/jimb.v2i1.3694>