

# Original Research Article

## Analysis of Return on Asset and Inflation on Stock Returns in Telecommunication Sector Companies on IDX

### ABSTRACT

**Aims:** The primary objective of this study was to assess the impact of return on assets (ROA) and inflation on stock returns for telecoms businesses listed on the IDX from 2019 to 2023.

**Study design:** This research is a quantitative study that intends to investigate the effect of Return on Asset and Inflation on Stock Returns.

**Place and Duration of Study:** Indonesia Stock Exchange (IDX) between March to October 2024.

**Methodology:** The research method used is descriptive method with a quantitative approach, with the classical assumption test data analysis method, multiple linear regression analysis and hypothesis testing. The sampling technique in this study was purposive sampling where only 10 of the 16 populations were sampled.

**Results:** The Sig. result for ROA is  $0.010 < 0.05$  and the t count value is  $2.679 > t$  table  $2.012$ , meaning that ROA on variable Stock Return has a significant effect partially, while for inflation it is  $0.011 > 0.05$  and the t count value is  $2.657 > t$  table  $2.012$  means that Inflation on variable Stock Return does not have a significant effect partially. As for the F test results, the calculated F value is  $6.233$ . While in the distribution table the value of F at a significant level of 5% is  $3.195$ . The significant value is at a value of  $0.004 > 0.05$ , it can be concluded that ROA (X1), and inflation (X2) simultaneously have a significant effect on Stock Returns (Y).

**Conclusion:** Both ROA and Inflation Partially has a negative and significant effect on stock returns. In addition, simultaneously the results showed that ROA and Inflation simultaneously had a significant effect on Stock Returns.

*Keywords: Return on Assets, Inflation, Stock Return, Telecommunication, IDX*

### 1. INTRODUCTION

Investment growth in a country is strongly influenced by the economic development of the country itself. A good economic level will make the prosperity of its people good too. A high level of prosperity can be seen from the amount of community income. If this is true, then many people will invest their assets to be stored either in the form of securities or shares that can be traded in the capital market.

Investment in the capital market in the form of shares can make investors very interested in making transactions, where investors expect a return from the investment made. By buying shares in the capital market, investors will get benefits. However, to get a high stock return

also has uncertainty and high risk in determining stock returns which makes it difficult for investors to predict. Return is one of the factors that motivate investors to invest and is also a reward for the investor's courage in bearing the risk of the investment he makes (Tandelilin, 2010). Moreover, return is a factor that can motivate investors to invest as well as a reward for the courage of investors in facing the risk of an investment to be made. Therefore, investors or potential investors utilize a variety of information to estimate risk and uncertainty. The information is in the form of financial statements which are information from the company's internal sources. In addition, in the form of economic and political conditions which are sources of information from external companies. Return is the expectation desired by investors, in the short-term investors are looking for a price gap (Capital gain), then in the long-term investors expect dividends (Yield) distributed by the company. However, because the company does not always provide regular cash dividends to its shareholders, the return can be as follows sought by calculating the capital gain alone (Purwitajati & I Made, 2016).

**Table 1. Stock Returns of Telecommunication Sector Companies on the IDX  
Period 2019-2023**

Year	KBLV	TLKM	CENT	EXCL	FREN	GOLD	IBST	ISAT	SUPR	TBIG	TOWR
2019	0,64	-0,16	0,08	-0,33	0,56	-0,03	0,02	-0,65	0,00	-0,44	-0,14
2020	-0,61	0,06	-0,15	0,59	0,77	-0,15	-0,21	0,73	-0,52	0,71	0,17
2021	0,50	-0,17	0,95	-0,13	-0,51	0,04	0,11	0,74	0,25	0,33	0,19
2022	0,39	0,22	0,63	0,16	-0,30	0,74	-0,2	0,23	2,77	0,81	0,17
2023	-0,83	-0,07	-0,52	-0,32	-0,24	-0,20	-0,01	0,00	1,20	-0,22	-0,02

Source: Data processed in 2024

Based on table 1 data on stock returns in the Telecommunications sector which is not stable from year to year, the largest stock return value is 2.77 owned by PT Solusi Tunas Pratama (2022). This shows that the company has the highest rate of return in the form of rewards obtained from stock investment in the Telecommunications sector. The smallest return value is - 0.83 owned by PT First Media Tbk (2023) and PT Indosat Tbk (2019), this shows that the company has not been able to benefit from the sale and purchase made on the Indonesia Stock Exchange.

The internal factors in this study are profitability ratios, which are ratios that measure the company's ability to earn profits and market valuation ratios, which are a set of ratios that link stock prices to earnings, cash flow, and book value per share (Brigham & Houston, 2010). This profitability ratio is projected on Return on Asset (ROA), where this ratio is used to measure the company's effectiveness in generating profits by utilizing its assets. The higher the ROA value, the better the company's performance in using its assets to generate profits, with the increase in the profitability value of the company which has an impact on the stock returns obtained by investors will also be greater (Kasmir, 2012). This makes investors interested in buying the company's shares and has an impact on the price and stock returns that are increasing.

Return On Asset (ROA) is a ratio used to show the results of all assets used by the company to operate and measure the effectiveness of management in managing company assets (Kasmir, 2018). If the ROA of a company is higher, the utilization of its assets to generate net

profit after tax will be even more effective. With the increase in ROA, the company's profitability will improve. This will be an attraction for investors to own these shares due to increased profitability that will also be felt by shareholders.

**Table 2. Changes in ROA of Telecommunication Sector Companies on IDX  
Period 2019-2023**

Year	KBLV	TLKM	CENT	EXCL	FREN	IBST	ISAT	SUPR	TBIG	TOWR
2019	0,60	0,13	6,84	0,06	0,14	0,02	0,04	0,10	24,13	0,09
2020	35,69	0,12	1,56	11,36	0,08	0,01	0,03	20,46	28,06	0,08
2021	3,25	0,12	66,74	5,49	0,04	0,01	10,04	58,85	0,03	0,12
2022	0,28	0,12	40,83	0,02	1,00	0,01	0,11	5,94	0,04	0,05
2023	0,22	0,10	0,12	0,01	0,02	0,00	0,05	97,52	0,04	0,05

Source: Data processed in 2024

Based on table 2 data on changes in ROA from 2019-2023, experiencing unstable fluctuating changes from year to year, a very high ROA value is the SUPR company in 2023 of 97.52% where at that time this company was able to optimize the use of its assets. The lowest ROA value is IBST in 2023 at 0% where this company is very inefficient in using its assets. These changes show how the performance of a telecommunication sector company is efficient in using its own capital during the observation period which can affect stock returns.

The external factor in this study is inflation because the inflation rate can illustrate the size of the risk that will be faced in making an investment, whereas if there is high inflation it will affect the price level of the Indonesia Composite Index (ICI) to decrease. Inflation is an overall and continuous increase in prices. If the price increase only occurs in a few goods, then it cannot be said to be inflation unless the increase extends to other goods. Inflation has a tendency to increase the overall price of products. A high inflation rate can reduce the real income earned by investors from an investment. Inflation is an increase in commodity prices in general caused by the asynchronization between the commodity procurement system program (production, pricing, money printing, etc.) and the level of income owned by the community (Putong, 2013). The high inflation rate will reduce company profits so that it also has an impact on the rate of return of investors (Wijaya, 2019). Unstable economic conditions inflation can occur at any time, as an investor must be able to anticipate these conditions when investing.

**Table 3. Inflation Data for the Period 2019-2023**

Period	Inflation Data
2019	3.13 %
2020	2.72 %
2021	1.68 %
2022	1.87 %
2023	5.51 %

Source: Data processed in 2024

Based on table 3 Inflation in Indonesia for 5 years of observation has decreased where in 2019 inflation reached a high number slightly above the Bank of Indonesia (BI) target but in the following year it decreased and was below the BI inflation target, then again experienced a significant increase and was relatively high above the BI inflation target in 2023, thus allowing the relationship between inflation as an external factor of the company that affects the stock price of telecommunication sector companies on the IDX. The high inflation rate indicates that the risk of making an investment is quite large because high inflation will reduce the rate of return of investors.

## 2. MATERIAL AND METHODS / EXPERIMENTAL DETAILS / METHODOLOGY (ARIAL, BOLD, 11 FONT, LEFT ALIGNED, CAPS)

In this study, researchers used associative or correlation methods with a quantitative approach. Associative research is a formulation of research problems that asks about the relationship between two or more variables (Sugiyono, 2019). The research focused on the effect of return on assets (ROA) and inflation on stock returns of Telecommunication Sector companies listed on the IDX. The sampling procedure used is the non-probability method with Purposive sampling technique which is a sample selection technique based on certain criteria. Data collection techniques in this study with data collection techniques through documentation. Documentation is one of the data collection techniques based on documents or written reports published by the company concerned.

This study uses multiple regression methods to process data and to determine the effect of each independent variable (ROA and Inflation) on Stock Returns both simultaneously and partially.

## 3. Results and Discussion

### 3.1. Results

**Table 4. Descriptive Analysis Results**

	N	Minimum	Maximum	Mean	Std. Deviation
Y (Stock Return)	50	-,83	2,77	,1446	,59207
X1 (ROA)	50	,00	97,52	8,4170	19,67659
X2 (Inflation)	50	1,68	5,51	2,9820	1,38601
Valid N (listwise)	50				

Source: Data processed in 2024

Based on the table 4, it shows that the number of observations of the telecommunications sector listed on the IDX for the period 2019-2023 in this study is 50 data. The mean and average stock return is 0.14%. The lowest stock return (minimum) is -0.83 and the highest stock return (maximum) is 2.77%. From the data above, it can be seen that the average stock return (mean) faces a positive return transformation with an average stock return of 2.77%. This shows that during the period 2018 to 2022, in general, the share prices of telecommunications sector companies sampled in this study have increased. The standard deviation of stock returns of 0.59% is greater than the average stock return of 0.14%. Stock returns have a fairly large distribution, because the standard deviation is quite large from the average value, so it can be concluded that the data on the stock return variable is not good.

The Return on Asset (ROA) variable has the smallest (minimum) value of 0, 00% and the largest (maximum) of 97, 52%. The average (mean) of Return on Asset (ROA) is 8, 41% with a standard deviation value of 19, 67% greater than the mean value, this indicates that the data on the ROA has a large enough coarseness because the standard deviation is quite large than the mean. Thus, it can be concluded that the data on the ROA variable is not good.

The mean value of inflation of 2.98% indicates that inflation has decreased from 2018 to 2022, with a maximum value of 5.51% and a minimum of 1.68%. The standard deviation of inflation is 1.38% which is smaller than the average value of 2.98%. By looking at the magnitude of the standard deviation value which is smaller than the average so that it can be used in the inflation variable has a small distribution, so it can be concluded that the data used is good data.

**Table 5. Normality Test Results**

N	50
Test Statistic	,117
Asymp. Sig. (2-tailed)	,084 <sup>C</sup>

Source: Data processed in 2024

Based on the table 5, the sig. value of 0.08 is greater than 0.05 which indicates that the data is normally distributed

**Table 6. Multicollinearity Test Results**

Model		Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.	Collinearity Statistics	
		B	Std. Error				Tolerance	VIF
1	(Constant)	1,985	,567		3,499	,001		
	X1_1	-,308	,115	-,351	-2,679	,010	,980	1,021
	X2_1	-,483	,182	-,348	-2,657	,011	,980	1,021

Source: Data processed in 2024

Based on the table above, it can see that from the ROA (X1), and Inflation (X2) variables, the tolerance value is below 1 and the VIF value is below 10, therefore it can be concluded that in this model there is no multicollinearity problem.

The results of observations using the scatterplot graph (figure 1) can be seen that there is a pattern that spreads below and above the zero number of the Y axis, this indicates that there is no heteroscedasticity.

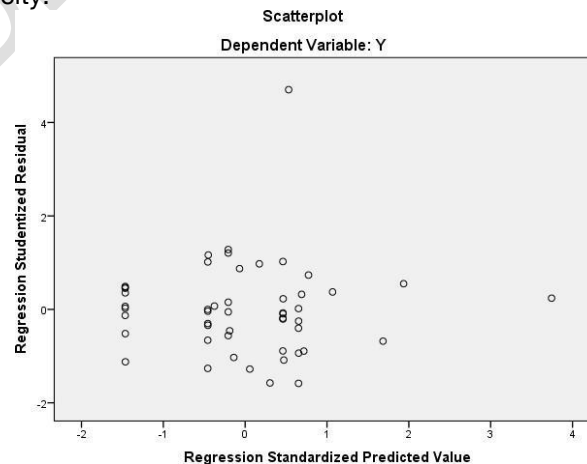


Figure 1 Heteroscedasticity Test Results

**Table 7. Autocorrelation Test Results**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,458 a	,210	,176	,53745	1,832

a. Predictors: (Constant), X2\_1, X1\_1

b. Dependent Variable: Y

**Source:** data processed with SPSS Ver.24

Based on the results of the autocorrelation test above, it can be seen that the Durbin Watson table shows  $n = 50$ ,  $k = 2$ , obtained  $dL = 1.4625$ ,  $dU = 1.6283$ ,  $4 - DW$  ( $4 - 1.832 = 2.168$ ). Based on the SPSS results above, it can be seen that the DW value = 1.832, which means  $1.4625 < 2.168 > 1.6283$ , it can be concluded that there are no symptoms of autocorrelation.

**Table 8. Linearity Test Results Return on Asset Variable**

			ANOVA Table				
			Sum of Squares	Df	Mean Square	F	Sig.
Y *	Between	(Combined)	14,975	32	,468	3,612	,003
X1_1	Groups	Linearity	1,562	1	1,562	12,054	,003
		Deviation from Linearity	13,413	31	,433	3,340	,006
	Within Groups		2,202	17	,130		
	Total		17,177	49			

**Source:** data processed with SPSS Ver.24

Based on the table 8, the linearity test results of the ROA variable show a linearity significance value of  $0.003 < 0.05$ , it can be concluded that there is a linear relationship between ROA and stock returns.

**Table 9. Inflation Variable Linearity Test Results**

			ANOVA Table				
			Sum of Squares	Df	Mean Square	F	Sig.
Y *	Between	(Combined)	2,208	4	,552	1,659	,176
X2_1	Groups	Linearity	1,528	1	1,528	4,593	,038
		Deviation from Linearity	,680	3	,227	,681	,568
	Within Groups		14,969	45	,333		
	Total		17,177	49			

**Source:** data processed with SPSS Ver.24

Based on the table 9, the results of the inflation variable linearity test show a linearity significance value of 0.038 < 0.05, it can be concluded that there is a linear relationship between inflation and stock returns.

**Table 10. Multiple Linear Test Results**

Model		Unstandardized Coefficients		Standardized Coefficients Beta	T	Sig.
		B	Std. Error			
1	(Constant)	1,985	,567		3,499	,001
	X1_1	-,308	,115	-,351	-2,679	,010
	X2_1	-,483	,182	-,348	-2,657	,011

a. Dependent Variable: Y

**Source:** data processed with SPSS Ver.24

From the table 10, by paying attention to the numbers in the Unstandardized Coefficient Beta column, the multiple regression equation can be arranged as follows:

$$Y = 1.985 + (-0.308X1 + (-0.483X2))$$

From the regression equation, several things can be interpreted, including:

- The constant value of the equation above is **1.985** stating that if the value of ROA, and Inflation is zero, then the stock return that occurs is **1.985**.
- The Ln\_X1 regression coefficient of **-0.308** indicates that every 1% increase in Ln\_X1, Ln\_Y will decrease by **0.308**.
- The Ln\_X2 regression coefficient of **-0.483** states that every 1% addition of Ln\_X2 will reduce Ln\_Y by **0.483**.

**Table 11. t-test Results**

Model	B	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
		B	Std. Error			
1	(Constant)	1,985	,567		3,499	,001
	X1_1	-,308	,115	-,351	-2,679	,010
	X2_1	-,483	,182	-,348	-2,657	,011

a. Dependent Variable: Y

**Source:** data processed with SPSS Ver.24

The influence of each ROA and inflation variable on stock returns can be seen from the direction of the sign and the level of significance (profitability). The ROA variable has a negative direction, as well as the inflation variable also shows a negative direction. Based on the data in table 11, the Sig. result for ROA is 0.010 < 0.05 and the t count value is 2.679 > t table 2.012, meaning that variable X1 on variable Y has a partially significant effect, while for inflation it is 0.011 > 0.05 and the t count value is 2.657 > t table 2.012, meaning that variable X2 on variable Y does not have a partially significant effect.

**Table 12. F Test Results**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	3,601	2	1,800	6,233	,004 <sup>b</sup>
	Residuals	13,576	47	,289		
	Total	17,177	49			

a. Dependent Variable: Y

b. Predictors: (Constant), X2\_1, X1\_1

Source: data processed with SPSS Ver.24

The table 12 shows the number of F test results resulting in an F count of 6.233. Meanwhile, in the distribution table the value of F at a significant level of 5% is 3.195. The significant value is at a value of  $0.004 > 0.05$ , it can be concluded that ROA (X1), and inflation (X2) simultaneously have a significant effect on Stock Returns (Y).

## 3.2. Discussion

### **3.2.1. Hypothesis Test of the Effect of Return on assets (ROA) on Stock Returns**

The first hypothesis proposed states that Return on Asset (ROA) has a positive and significant effect on stock returns. From the results of the partial test calculation, a significance value of 0.010 is obtained, where the significance value is less than 5% and the ROA coefficient value is as follows -2.679, the hypothesis is accepted, meaning that there is a significant influence between the variable Return on Assets (ROA) and the variable Stock Return of Telecommunication Sector Companies listed on the IDX.

The results of this study indicate that an increasing ROA value indicates the company's overall performance in generating profits with the total assets available in the company. ROA is used to see the level of efficiency of the company's operations as a whole. A negative ROA is due to the company being in a negative condition (loss), this shows that the ability of the capital invested in all assets has not been able to generate profits. This can reduce the interest of investors or potential investors to invest in the company. A decrease in investor interest in investing will have an impact on the decline in the company's share price, so that the company's return will also decrease.

The results of this study do not support research conducted by Prihantini (2009) and Hisar et al (2021) which state that ROA has a positive and significant effect on stock returns, but support research conducted by Simorangkir (2019) which states that return on assets has a negative and significant effect on stock returns of Mining Companies.

### **3.2.2. Hypothesis Test of the Effect of Inflation on Stock Returns**

The second hypothesis proposed states that inflation has a negative and significant effect on stock returns. From the partial test calculation results, the significance value is 0.004 and the inflation coefficient value is -2.657. Because the significance value is less than 5%, the hypothesis is accepted, meaning that there is a significant influence between the inflation variable and the stock return variable.

A high inflation rate is often associated with an overheating economy, where the economy experiences a demand for products that exceeds the supply capacity of the products. In addition, a high inflation rate also reduces the level of real income earned by investors from

their investments. This can cause the demand for various types of stocks to decrease which in turn will have an impact on the stock returns earned by shareholders to be reduced.

The results of this study support research conducted by Aziz (2012) which states that interest rates and inflation have a negative and significant effect on stock returns in the banking sector on the IDX. However, it does not support research conducted by Suryani and Gede (2018) which states that inflation has a negative and insignificant effect on stock returns.

### **3.2.3. Hypothesis Test the Effect of Return on Assets (ROA) and Inflation Simultaneously on Return Shares**

The third hypothesis proposed states that ROA and Inflation simultaneously have a significant effect on stock returns. From the results of the simultaneous test calculation, a significant value is obtained at a value of  $0.004 > 0.05$ . It can be concluded that ROA (X1), and inflation (X2) simultaneously have a significant effect on Stock Returns (Y).

## **4. CONCLUSION**

- a. Based on the results of the research, it shows that Return on Assets (ROA) has a negative and significant effect on stock returns.
- b. Based on the results of the research, it shows that inflation has a negative and significant effect on stock returns.
- c. Based on the results of the research, it shows that ROA (X1) and inflation (X2) simultaneously have a significant effect on Stock Returns (Y).

## **COMPETING INTERESTS**

Declaration of competing interest should be placed here. All authors must disclose any financial and personal relationships with other people or organizations that could inappropriately influence (bias) their work. Examples of potential conflicts of interest include employment, consultancies, honoraria, paid expert testimony, patent applications/registrations, and grants or other funding. If no such declaration has been made by the authors, SDI reserves to assume and write this sentence: "Authors have declared that no competing interests exist."

## **COMPETING INTERESTS DISCLAIMER:**

Authors have declared that they have no known competing financial interests OR non-financial interests OR personal relationships that could have appeared to influence the work reported in this paper.

## **REFERENCES**

1. Aziz, N, S. (2012). Pengaruh Return on asset (ROA), Debt to Equity Ratio(DER), Tingkat Suku Bunga, dan Tingkat Inflasi terhadap Return Saham Sektor Perbankan di Bursa Efek Indonesia (Periode 2003-2010). Skripsi : Universitas Hasanuddin. <https://core.ac.uk/download/pdf/25486085.pdf>
2. Brigham, E. F., & Houston, J.F. (2010). Dasar-Dasar Manajemen Keuangan. Edisi 11. Jakarta: Salemba Empat.

- <https://openlibrary.telkomuniversity.ac.id/home/catalog/id/10185/slug/dasar-dasar-manajemen-keuangan-buku-1-11-e-.html>
3. Hisar, R., Jaka, S., Ahmad, A., & Lukman, C. (2021). Pengaruh ROA dan DER Terhadap Return Saham pada Perusahaan Manufaktur di BEI yang Go Publik. *Forum Ilmiah T*, 18(2). 178-189.  
<https://ejournal.esaunggul.ac.id/index.php/Formil/article/view/4300>
  4. Kasmir. (2012). *Financial Report Analysis*. Jakarta: PT Raja Grafindo Persada.
  5. Kasmir. (2018). *Financial Statement Analysis*. Depok: PT Raja Grafindo Persada.
  6. Prihantini, R. (2009). Analisis Pengaruh Inflasi, Nilai Tukar, ROA, DER, Dan CR Terhadap Return Saham (Studi Kasus Saham Industri Real Estate And Property Yang Terdaftar Di Bursa Efek Indonesia Periode 2003–2006). Tesis Magister Manajemen Universitas Diponegoro. Semarang.  
<https://ejournal.undip.ac.id/index.php/jbs/article/view/14196>
  7. Purwitajati, E., & I Made, P, D, P. (2016). Pengaruh Debt to Equity Ratio pada Return Saham Dengan ukuran Perusahaan Sebagai Pemoderasi. *E-Jurnal Akuntansi Universitas Udayana*, 15(2), 1086- 1114.  
<https://ojs.unud.ac.id/index.php/akuntansi/article/download/17615/13833>
  8. Putong, I. (2013). *Economics Pengantar Mikro dan Makro*, Jakarta: Mitra Wacana Media. <https://inislite.ipdn.ac.id/opac/detail-opac?id=4308>
  9. Simorangkir, R, T, M, C. (2019). Pengaruh Kinerja Keuangan Terhadap Return saham Perusahaan Pertambangan. *Jurnal Bisnis dan Akuntansi*, 21(2), 155-164.  
<https://dx.doi.org/10.34208/jba.v21i2.616>
  10. Sugiyono. (2019). *Quantitative, Qualitative and R&D Research Methods*. Bandung: Alfabeta.
  11. Suryani, N, K., & Gede, M, S. (2018). Pengaruh Suku Bunga, Inflasi dan Nilai Tukar Terhadap Return Saham di Bursa Efek Indonesia. *E-Jurnal Manajemen Unud*, 7(8), 3172-3200. <https://media.neliti.com/media/publications/255328-none-90695ef3.pdf>
  12. Tandellin, E. (2010). *Portfolio and Investment Theory and Applications*. First Edition. Yogyakarta: Kanisius.
  13. Wijaya, A. (2019). Pengaruh Inflasi, Suku Bunga, Nilai Tukar (Kurs), Return on Asset (ROA) dan Debt to Equity Ratio (DER). Universitas Muhammadiyah Magelang. <http://repositori.unimma.ac.id/956/>

#### **DEFINITIONS, ACRONYMS, ABBREVIATIONS**

Here is the Definitions section. This is an optional section.

**Term:** Definition for the term