

The Influence of Financial Ratios and Investor Sentiment on Stock Return of IDX Energy Sector Companies

Ikhsanul Amal^{1*}, M. Maulidin Fachrur², Anggrainy Putri Ayuningrum³

^{1,2,3} Faculty of Economics and Business, University of Pekalongan, Pekalongan, 51111, Indonesia

*Corresponding Author – Email Address : Ikhsanulamal83@gmail.com

ABSTRACT

The present study aims to investigate the effect of financial ratios and investor sentiment on the stock returns of energy sector firms listed on the Indonesia Stock Exchange (IDX). The stock returns of energy sector companies listed on the Indonesia Stock Exchange (IDX) exhibit noticeable inconsistencies. Accordingly, this study seeks to explore whether financial ratio indicators and investor sentiment exert a significant influence on those returns. Beyond the analysis of financial ratio variables, this study integrates investor sentiment as an additional explanatory factor outside the scope of conventional financial metrics. Multiple Linear Regression Analysis is used to examine the relationship between the independent variables (Total Asset Turnover, Return on Equity, Debt to Equity Ratio, Current Ratio, Investor Sentiment) and the dependent variable (Stock Return). Among the five variables examined, Return on Equity, Current Ratio, and Investor Sentiment have a positive effect on stock returns. Meanwhile, the other two variables, Total Assets Turnover and Debt to Equity Ratio have a negative effect on stock returns. The study concludes that stock returns in the IDX energy sector are significantly influenced by profitability, liquidity, and investor sentiment, implying that both financial fundamentals and market psychology play crucial roles in shaping investor returns.

ARTICLE INFO

Keywords:
Stock_return,
Financial_ratios,
Investor_Sentiment,
IDX, Energy

1. Introduction

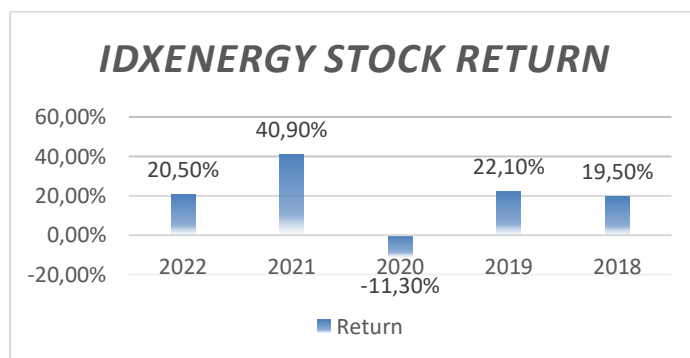
The Indonesian Central Securities Depository (KSEI) stated on its official website that there has been an increase in the national investment world in the last 3 years. This increase is a result of the reduction in employment, and also the limitation of activities carried out outside the home since the existence of covid-19, many people have finally turned into investors in the Indonesian capital market. The Financial Services Authority (OJK) noted that since 2020, there has been an increase of more than 2.5 million investors in the capital market every year. The high enthusiasm for the capital market can be seen from the growth in the number of investors until the end of February 2024. According to data from the Indonesian Central Securities Depository (KSEI), the number of investors in the Indonesian

capital market reached 12.48 million, an increase of 1.22% compared to January 2024 which recorded 12.33 million investors. When compared to February 2023, this number increased by 14.90% (yoy) from 10.62 million investors.

It cannot be denied that investors certainly carry out investment activities to get profits. The source of profit that can be obtained from investing in stocks is by dividends or by obtaining stock return. Stock return is the profit generated from the difference between the current stock price and the previous price. An increase in stock return provides an indication of an increase in the return (Meliza et al., 2024). Meanwhile, dividends are compensation received by shareholders, given by companies that distribute dividends (Mahirun & Kushermanto, 2018). Not all companies pay dividends every year. Therefore, stock return are often chosen by investors to obtain their profits in the stock market. If the calculation of stock return shows a positive number, this indicates that the investment is profitable or generates capital gains. Conversely, if the calculation result is negative, then the investment is losing or generating capital loss (Handayani et al., 2022).

Certainly, Stock investors cannot just invest their money in any random company's stock. This is because the company's share price will not always rise. There are already numerous companies whose shares are publicly traded on the Indonesia Stock Exchange. The Indonesia Stock Exchange also classifies these companies into various sectors, one of which is the energy sector, commonly referred to as IDXENERGY. The energy sector is one of the core sectors in the Indonesian economy, as it comprises companies engaged in the trade of products and services related to the extraction of both non-renewable and renewable energy sources. Nevertheless, this does not imply that the stock return of companies in the energy sector are consistently favorable. The stock return of energy sector companies have experienced declines in certain years, as reported by the Indonesia Stock Exchange on its official website.

Figure 1. IDXENERGY Stock Return



Source: www.idx.co.id

The data indicate that the energy sector has exhibited fluctuating stock return over the past five years. In 2020, the sector experienced a significant decline, with stock return dropping sharply from 22.10% in 2019 to -11.30% in 2020. Nevertheless, the energy sector managed to recover in the following year, with stock return increasing to 40.9% in 2021. These data suggest that the stock return of energy sector companies listed on the Indonesia Stock Exchange still require further in-depth analysis, considering the various factors that may influence them.

The factors that may influence a company's stock return are becoming increasingly complex and essential to understand. One such factor is the activity ratio (Noviyanti & Ruslim, 2021). The activity ratio can be proxied by the Total Asset Turnover. This financial ratio is used to measure the efficiency

of a company's use of total assets in generating revenue or sales (Wahyudi & Deitiana, 2020). In addition to the activity ratio, (Pradiana & Yadnya, 2019) said the profitability ratio is also an important factor that needs to be understood within a company. According to (Sihombing, 2021) the profitability ratio can be proxied by Return on Equity (ROE). Return on Equity provides an overview of a company's ability to generate profit through the utilization of its equity capital. In addition to activity and profitability ratios, another important financial ratio to understand is the solvency ratio (Agustine, 2021). The solvency ratio can be proxied by the Debt to Equity Ratio (Intan & Jannah, 2018). The Debt to Equity Ratio is used by companies to measure the extent to which debt is utilized in comparison to equity in financing their sources of funding. Another financial ratio that needs to be considered is the liquidity ratio (Pradiana & Yadnya, 2019). The liquidity ratio can be proxied by the Current Ratio. This ratio illustrates the extent to which current assets are able to cover current liabilities (Supriantikasari & Utami, 2019). On the other hand, investor emotions tend to fluctuate along with asset prices, as well as the value of assets based on their economic fundamentals. Measuring investor sentiment is important for determining theoretical asset pricing and practical investment decisions (Zhou, 2018). Positive sentiment tends to increase interest and demand for stocks, which may lead to a rise in prices. Conversely, negative sentiment can result in a decline in stock prices (Fadhel et al., 2022).

Referring to previous studies, a gap has been identified between the findings of one researcher and another. Nikmah et al. (2021), Wahyudi & Deitiana (2020), Winedar (2020) found that Total Asset Turnover has a positive and significant effect on stock return. Otherwise Alfian & Indah (2022), Saputri & Ryandono (2020) found a negative and significant effect between Asset Turnover on stock return. Devi & Artini (2019), Saraswati et al. (2023), Sinaga et al. (2020) found a positive and significant effect between Return on Equity to the stock return. In contrast to previous studies, Mochammad Ridwan Ristyawan (2019), Hikmawati et al. (2022) found a negative and significant effect Return on Equity ratio on stock return. Yanita Sanjaya & Maulida (2022), Vida Mega Pradita & Dedi Suselo (2022), Irawan (2021) said their research found a positive and significant effect between Debt to Equity Ratio to the stock return. Meanwhile Nawangsari et al. (2021), Malanuwa et al. (2023), Karyatun (2023) said that debt to equity ratio has negative and significant effect on stock return. Thoha (2023), Shufiazis & Iradianty (2023), Hutauruk et al. (2022) found a positive and significant effect current ratio on stock return. Conversely Karyatun (2022), Sidarta et al. (2021) found that current ratio has negative and significant effect on stock return. In addition to financial ratios Fadhel et al. (2022), Suhendah et al. (2022), P H & Rishad (2020) found that investor sentiment has a positive and significant effect on stock return. On the other hand, Wang et al. (2021), Cevik et al. (2022) found a negative and significant effect investor sentiment on stock return.

Problem Formulation

Based on the past research conducted above, it can be observed that there is still a gap in previous research, namely the existence of inconsistent findings between one study and another, with some indicating a significant positive effect and others indicating a significant negative effect. In addition, there is also inconsistency in stock returns of energy sector companies listed on the Indonesia Stock Exchange. Therefore, Based on the research problems that has been described, the author considers it necessary to conduct further research on the Influence of Financial Ratios and Investor Sentiment on Stock Return of IDX Energy Sector Companies.

Research Questions

Based on the research problems and gap research, the research questions in this study can be formulated as follows.

1. Does the Total Asset Turnover have a significant effect on stock returns?
2. Does the Return on Equity have a significant effect on stock returns?
3. Does the Debt to Equity Ratio have a significant effect on stock returns?
4. Does the Current Ratio have a significant effect on stock returns?
5. Does investor sentiment have a significant effect on stock returns?

Research Objectives

Based on the research questions mentioned above, the objectives of this study can be summarized as follows.

1. To test and analyze the effect of Total Asset Turnover on stock returns.
2. To test and analyze the effect of Return on Equity on stock returns.
3. To test and analyze the effect of Debt to Equity Ratio on stock returns.
4. To test and analyze the effect of Current Ratio on stock returns.
5. To test and analyze the effect of Investor Sentiment on stock returns.

2. Literature Review

Theoretical Framework

Signaling Theory

Signaling Theory refers to actions taken by a company to convey signals to investors regarding management's perspective on business opportunities. These signals consist of information related to the actions undertaken by management to meet the expectations of the owners (Brigham & Houston, 2012). Every investor requires information regarding the condition of a company, and business actors must provide information about the company's condition. If the information is valuable, the market is expected to respond upon receiving it (Jogiyanto, 2022).

Signaling Theory explains that investor decisions are influenced by how financial signals are received by investors. Stock returns are the result of a combination of financial ratio signals and the interpretation of investor sentiment. Strong financial ratios can provide a positive signal to investors; however, the market response largely depends on how investors perceive and interpret that signal. Therefore, this study will examine how financial ratios (internal signals) and investor sentiment (external signals) interact in influencing stock returns.

Stock Return

Stock return refers to the income earned from an investment, which includes both the income received and changes in market price. It is generally expressed as a percentage of the initial investment value in the market (Van Horne & Wachowicz, 2008). If the result of the stock return calculation shows a positive value, it indicates that the investment is profitable or generates a capital gain. Conversely, if the result is negative, the investment has incurred a loss or resulted in a capital loss (Handayani et al., 2022). The higher the percentage of a company's stock return, the better the company's image and the more attractive it becomes to investors (Januardin et al., 2020).

According to (Jogiyanto, 2022), stock returns are divided into two types. One of them is Realized Return, which refers to returns that have already occurred and can be calculated based on total return or relative return. Secondly there is Expected Return, which refers to the return anticipated to be received in the future and is used in the investment decision-making process.

Activity Ratio

The activity ratio assists in decision-making related to the analysis of a company's asset utilization effectiveness (Kasmir, 2012). This ratio indicates how well a company manages and utilizes

its assets to generate sales (Noviyanti & Ruslim, 2021). Total Asset Turnover reflects the effectiveness of a company's use of its assets to generate sales (Wahyudi & Deitiana, 2020). According to (Gultom et al., 2020), the higher the Total Asset Turnover, the more capable a company is of generating profits from its total assets and optimizing future profit returns more effectively.

Referring to the study by (Purnamasari & Japlani, 2020), Total Asset Turnover is calculated by dividing sales by the company's total assets. The greater the sales, the higher the Total Asset Turnover value. Conversely, the larger the total assets, the lower the Total Asset Turnover value.

Profitability Ratio

The ability of a company to generate profit is often referred to as profitability (Pradiana & Yadnya, 2019). A company's profit level can be measured using profit ratios, profitability ratios, or also known as return ratios. Profitability reflects the company's operational success and indicates the final outcome of various policies and decisions made by management. According to (Kasmir, 2012), the ratio of net profit after tax to equity capital is known as Return on Equity (ROE). The ROE ratio indicates the effectiveness of equity capital utilization. The higher the ROE value, the better the company's performance. ROE is also referred to as total asset turnover or return on equity (Irham, 2016).

Return on Equity ratio assesses how effectively a company utilizes its resources to generate returns for equity holders. Referring to the study by (Devi & Artini, 2019), ROE can be calculated by dividing the company's net profit after tax for a given period by the capital contributed by the company's owners.

Solvency Ratio

The solvency ratio is used to measure the extent to which a company's assets are financed by debt (Kasmir, 2012). If the solvency ratio indicates a high value, it means the company faces a greater risk of loss. The Debt to Equity Ratio (DER) is a ratio used by companies to measure the proportion of debt used compared to equity in financing funding sources, whether short-term or long-term debt (Intan & Jannah, 2018). This ratio reflects the company's risk level, where a lower DER indicates a greater ability of the company to secure its debts with its equity. Conversely, a higher DER implies less stable company profits and a greater likelihood that the company may not meet its debt obligations (Pamungkas & Hartanto, 2016). Referring to the study by (Januardin et al., 2020), DER can be calculated by comparing the total debt—which includes all types of the company's liabilities, both short-term and long-term—with the total equity or total capital.

Liquidity Ratio

The liquidity ratio is understood as an indicator of a company's ability to meet its trade debt obligations. In business operations, delays in payment are common, making it necessary to use liquidity measures to assess the level of confidence in the company's effectiveness in running its business (Agustine, 2021). Liquidity can be proxied by the Current Ratio (Supriantikasari & Utami, 2019). The Current Ratio (CR) reflects a company's ability to meet short-term obligations and support the financing of operational activities (Helfert, 1997). When a company can carry out its operations smoothly, it increases its attractiveness to investors. According to (Alfian & Indah, 2022), the Current Ratio is calculated by dividing all assets that can be converted into cash within one year by liabilities, or all debts and obligations due within one year.

Investor Sentiment

Investor sentiment is a variable that can shape stock market prices, referring to investors' beliefs about future cash flows that are not always supported by fundamental information (Beer & Zouaoui, 2012). According to (De Long et al., 1990), there are two main types of investors, arbitrageurs

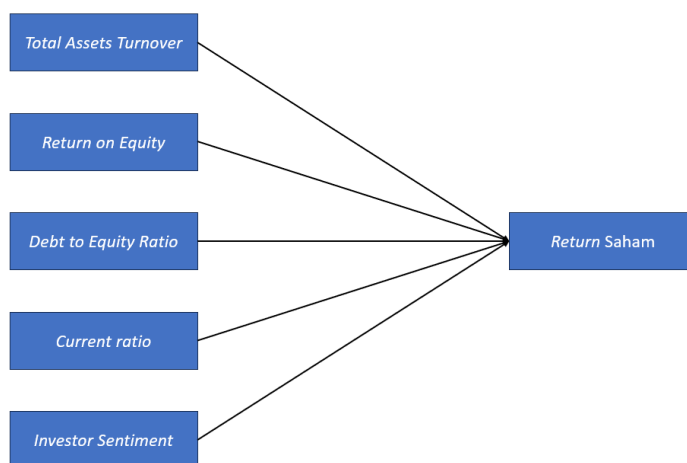
and noise traders. Arbitrageurs make decisions based on available information and are responsive to both positive and negative external sentiment. In contrast, noise traders tend to ignore fundamental analysis and instead focus on trend-based analysis. Investor sentiment represents the perceptions or opinions held by investors to predict stock prices in a market. It is also a behavioral finance assumption that can introduce systematic risk through noise, thereby affecting stock volatility (Fadhel et al., 2022).

There are several types of indicators that can be used to measure investor sentiment. Based on the study by (Baker & Wurgler, 2007), indicators for the investor sentiment variable include the consumer confidence index, investor surveys, mutual fund flows, dividend premium, and trading volume.

Research Model

Based on the theoretical framework previously discussed regarding the influence of the independent variables Total Asset Turnover, Return on Equity, Debt to Equity Ratio, Current Ratio, and Investor Sentiment on the dependent variable, which is Stock Return, the research model can be illustrated in the figure below.

Figure 2. Research model



Research Hypotheses

The Effect of Total Assets Turnover on Stock Return

Theoretically, the efficiency in utilizing assets to generate higher revenue can contribute to improved financial performance. This, in turn, may create expectations that the company will generate higher stock returns. The higher the Total Asset Turnover, the more capable the company is in generating profits from all of its assets, as well as in optimizing future profit returns (Gultom et al., 2020). Consequently, this condition is likely to attract investors to invest in the company, which will ultimately lead to an increase in stock prices and, consequently, in stock returns.

In previous studies, Nikmah et al. (2021), Wahyudi & Deitiana (2020), Winedar (2020) found that Total Asset Turnover has a positive and significant effect on stock returns. Based on the theory and previous research described above, the following research hypothesis can be proposed as.

H₁ : Total Assets Turnover has a positive and significant effect on Stock Return

The Effect of Return on Equity on Stock Return

Return on Equity (ROE) is one of the key indicators for measuring a company's efficiency in generating profit from the capital invested by shareholders (Sihombing, 2021). A high ROE indicates that the company is able to manage its equity optimally to generate profits (Devi & Artini, 2019).

Investors tend to show greater interest in companies that can consistently generate high ROE, as these firms are perceived to be more stable and have promising prospects.

High demand for the company's stock may lead to an increase in stock prices, which in turn positively impacts stock returns (Efendi et al., 2022). Referring to previous studies Devi & Artini (2019), Saraswati et al. (2023), Sinaga et al. (2020) it is suggested that Return on Equity has a positive and significant effect on stock returns. Based on the theory and previous research outlined above, the following research hypothesis can be proposed as.

H₂ : Return on Equity has a positive and significant effect on Stock Return

The Effect of Debt to Equity Ratio on Stock Return

Debt to Equity Ratio (DER) is a financial ratio used by companies to measure the extent to which debt is utilized in comparison to shareholders' equity to finance the company's assets, including both short-term and long-term obligations (Intan & Jannah, 2018). This ratio reflects the company's financial risk; the lower the DER, the greater the company's capacity to secure its debts through its own equity. Conversely, a high DER indicates greater financial leverage, which may result in earnings volatility and an increased likelihood that the company may fail to meet its debt obligations (Pamungkas & Hartanto, 2016).

A high DER value signals higher financial risk, which can deter investor interest and exert downward pressure on stock returns. Prior empirical studies such as those by Nawangsari et al. (2021), Malanuwa et al. (2023), Januardin et al. (2020) conclude that the Debt to Equity Ratio has a negative and significant effect on stock returns. Based on the theoretical framework and previous empirical evidence described above, the following research hypothesis can be proposed as.

H₃ : Debt to Equity Ratio has a negative and significant effect on Stock Return

The Effect of Current Ratio on Stock Return

Current Ratio is a liquidity ratio used to measure a company's ability to meet its short-term liabilities using its current assets (Supriantikasari & Utami, 2019). Companies with an adequate Current Ratio are considered more capable of managing short-term obligations without the need to liquidate fixed assets or seek emergency funding. This reflects a sound financial condition, which can enhance investor confidence, potentially influencing market stock prices and generating positive returns for investors (Sihombing, 2021).

Previous empirical studies such as those conducted by Thoha (2023), Shufiazis & Irdianty (2023), Hutauruk et al. (2022) found that Current Ratio has a positive and significant effect on stock return. Based on the theory and previous research outlined above, the following hypothesis can be formulated as.

H₄ : Current Ratio has a positive and significant effect on Stock Return

The Effect of Investor Sentiment on Stock Return

Investor sentiment reflects the attitudes, beliefs, and collective perceptions of investors toward a particular asset or market. Positive sentiment can influence the demand for stocks, which in turn may lead to an increase in stock prices and higher returns. Investor emotions tend to fluctuate in line with asset prices, as well as with asset values based on their economic fundamentals. Measuring investor sentiment is crucial for determining the theoretical asset price and for practical investment decisions (Zhou, 2018).

Investor sentiment can be driven by emotions, news, market trends, or economic events. Positive market sentiment will influence investor decisions and, consequently, increase stock return values. In previous studies Fadhel et al. (2022), Suhendah et al. (2022), P H & Rishad (2020), investor

sentiment was found to have a positive and significant effect on stock returns. Based on the theory and prior research discussed above, the following research hypothesis can be formulated as.

H₅ : Investor Sentiment has a positive and significant effect on Stock Return

3. Method, Data, and Analysis

This study employs a quantitative and associative approach. The quantitative approach is used because data collection focuses on numerical data, which is then analyzed to obtain implicit information behind the numerical values. Meanwhile, the associative approach is utilized to explore the relationships among the research variables under investigation. This study consists of independent variables, namely total asset turnover, return on equity, debt to equity ratio, current ratio, and investor sentiment, with the dependent variable being stock return.

This study utilizes empirical data obtained from the Indonesia Stock Exchange (www.idx.co.id) in the form of financial statements of energy sector companies listed on the Indonesia Stock Exchange (IDX) for the 2019–2023 period. The energy sector is selected because, based on data from the IDX, stock returns in this sector have exhibited inconsistency over the past five periods. Therefore, the author is interested in conducting research on stock returns in the energy sector.

Population and Sampling

The population of this study comprises all energy sector companies listed on the Indonesia Stock Exchange (IDX) during the 2019–2023 period, totaling 82 companies. The sampling method used in this study is purposive sampling. This technique involves selecting samples based on specific criteria or considerations. Purposive sampling is a non-probability sampling method, where not all members of the population have an equal chance of being selected. Only population elements that meet particular criteria relevant to the research objectives are chosen as samples.

The population in this study consists of energy sector companies listed on the Indonesia Stock Exchange (IDX), totaling 82 companies. The sample selection was carried out using the purposive sampling method, aiming to obtain a representative sample that aligns with the predetermined criteria. The sample selection criteria used in this study are as follows:

1. Energy sector companies listed on the Indonesia Stock Exchange (IDX).
2. Energy sector companies whose financial reports are not accessible during the 2019–2023 period.

Types and Methods of Data Collection

The data used in this study is secondary data. Secondary data refers to data that has already been made available and collected through indirect sources (Nurhayati, 2019). In this study, the data was obtained from the official website of the Indonesia Stock Exchange.

The data collection technique used in this study is the documentation technique. According to (Nurhayati, 2019), the documentation technique involves collecting data by recording necessary information using available electronic devices such as cameras, tape recorders, and so on. This technique is employed to assist researchers in storing the data that has been obtained. This study uses data derived from financial statements by downloading the companies' financial reports from the official website at <https://www.idx.co.id/id>.

Analysis Method

This study employs the multiple linear regression analysis method to examine the effect of Total Asset Turnover (TATO), Return on Equity (ROE), Debt to Equity Ratio (DER), Current Ratio (CR), and investor sentiment on stock return. The choice of this method is based on the primary objective

of the research, which is to determine the partial influence of the independent variables on stock return as the dependent variable. Multiple linear regression enables the analysis of linear relationships between one dependent variable and several independent variables, thus providing a more comprehensive view of the relative contribution of each variable in influencing stock return.

The use of this model is also relevant within the context of signaling theory, which posits that information conveyed by companies to the market, such as financial ratios and market sentiment can serve as signals for investors in making investment decisions. Accordingly, multiple linear regression analysis is used to test whether these financial signals and investor sentiment are indeed responded to by the market through changes in stock return. This approach is expected to provide a robust empirical foundation regarding the relationship between corporate fundamental indicators and market sentiment.

4. Result and Discussion

Normality Test

The normality test is conducted to determine whether the data residuals are normally distributed. To detect the normality of the data, a non-parametric statistical method, the One-Sample Kolmogorov-Smirnov test, can be employed.

Table 1. Normality Test

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		290
Normal Parameters ^{a,b}	Mean	0E-7
	Std. Deviation	.91583043
Most Extreme Differences	Absolute	.227
	Positive	.227
	Negative	-.170
Kolmogorov-Smirnov Z		3.866
Asymp. Sig. (2-tailed)		.000

a. Test distribution is Normal.

b. Calculated from data.

Based on the One-Sample Kolmogorov-Smirnov Test table above, the test conducted using 290 data points shows that the Asymp. Sig. (2-tailed) value is 0.000, which is less than the threshold of the classical assumption test, namely >0.05 . Therefore, it is necessary to remove outlier data and apply a data transformation using the natural logarithm (ln) formula to the variables Stock Return, Total Asset Turnover, Return on Equity, Debt to Equity Ratio, Current Ratio, and Investor Sentiment.

**Table 2. Normality Test After Transformation
 One-Sample Kolmogorov-Smirnov Test**

		Unstandardized Residual
N		215
Normal Parameters ^{a,b}	Mean	0E-7
	Std. Deviation	.17513734
Most Extreme Differences	Absolute	.065
	Positive	.065
	Negative	-.065
Kolmogorov-Smirnov Z		.960
Asymp. Sig. (2-tailed)		.315

a. Test distribution is Normal.

b. Calculated from data.

After performing outlier detection and data transformation using the natural logarithm (Ln) formula on the variables Stock Return, Total Asset Turnover, Return on Equity, Debt to Equity Ratio, Current Ratio, and Investor Sentiment, a total of 75 data points were identified as outliers. These data were excluded from the analysis as they had the potential to violate the assumption of normality and bias the regression results. Based on the table above, the Asymp. Sig. (2-tailed) value is 0.315, which is greater than 0.05, indicating that the data are normally distributed and the regression model satisfies the normality assumption.

Multiple Linear Regression Analysis

Multiple Linear Regression Analysis is used to examine the relationship between the independent variables (Total Asset Turnover, Return on Equity, Debt to Equity Ratio, Current Ratio, Investor Sentiment) and the dependent variable (Stock Return). The results of the multiple linear regression model are presented in the table below, and the data processing was conducted using the Statistical Package for the Social Sciences (SPSS) version 20.

**Table 3. Multiple Linear Regression Analysis
 Coefficients^a**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error			
1	(Constant)	-.081	.143		-.566	.572
	Total Assets Turnover	-.044	.087	-.036	-.510	.611
	Return on Equity	.695	.175	.279	3.970	.000
	Debt to Equity Ratio	-.019	.020	-.060	-.941	.348
	Current Ratio	.099	.043	.148	2.307	.022

Investor Sentiment	.220	.075	.190	2.930	.004
--------------------	------	------	------	-------	------

a. Dependent Variable: Stock Return

Based on the results of the multiple linear regression analysis table above, the regression equation can be formulated as follows:

$$Y = -0.081 - 0.036 X1 + 0.279 X2 - 0.060 X3 + 0.148 X4 + 0.190 X5$$

Based on the regression equation above, the following conclusions can be drawn:

- The constant value is -0.081, which means that if all independent variables (Total Assets Turnover, Return on Equity, Debt to Equity Ratio, Current Ratio, Investor Sentiment) are equal to zero, the dependent variable (Stock Return) would be -8.1%.
- The coefficient of Total Assets Turnover is -0.036, indicating that for every one-unit times increase in TATO, the Stock Return variable decreases by 3.6%.
- The coefficient of Return on Equity is 0.279, meaning that for every one-unit times Increase in ROE, the Stock Return increases by 27.9%.
- The coefficient of Debt to Equity Ratio is -0.060, meaning that for every one-unit times increase in DER, the Stock Return decreases by 6%.
- The coefficient of Current Ratio is 0.148, indicating that for every one-unit times increase in CR, the Stock Return increases by 14.8%.
- The coefficient of Investor Sentiment is 0.190, which means that for every one-unit times increase in IS, the Stock Return increases by 19%.

T test

The *t-test* is used to determine the extent to which each independent variable (Total Assets Turnover, Return on Equity, Debt to Equity Ratio, Current Ratio, Investor Sentiment) individually influences the dependent variable (Stock Return). The acceptance or rejection criteria for the *t-test* can be referred to in the *Coefficients* table of the SPSS output. If the significance value is less than 0.05, the variable has a significant effect; conversely, if the significance value is greater than 0.05, the variable has no significant effect. Based on the results of the SPSS analysis, the following outcomes were obtained:

Table 4. T test

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error			
1	(Constant)	-.081	.143		-.566	.572
	Total Assets Turnover	-.044	.087	-.036	-.510	.611
	Return on Equity	.695	.175	.279	3.970	.000
	Debt to Equity Ratio	-.019	.020	-.060	-.941	.348

Current Ratio	.099	.043	.148	2.307	.022
Investor Sentiment	.220	.075	.190	2.930	.004

a. Dependent Variable: Stock Return

Based on the table above, the following conclusions can be drawn:

- The first variable, Total Assets Turnover, shows a significance value of 0.611, which is greater than 0.05, indicating that TATO has no significant effect on stock return.
- The second variable, Return on Equity, shows a significance value of 0.000, which is less than 0.05, indicating that ROE has a significant effect on stock return.
- The third variable, Debt to Equity Ratio, shows a significance value of 0.611, which is greater than 0.05, indicating that DER has no significant effect on stock return.
- The fourth variable, Current Ratio, shows a significance value of 0.022, which is less than 0.05, indicating that CR has a significant effect on stock return.
- The fifth variable, Investor Sentiment, shows a significance value of 0.004, which is less than 0.05, indicating that IS has a significant effect on stock return.

Result Discussion

Based on the results of the variable testing that has been conducted, the following is a discussion of the findings of this study:

The Effect of Total Assets Turnover on Stock Return

Based on the results of the multiple linear regression analysis, a coefficient value of -0.036 was obtained, which indicates that each 1-unit increase in the TATO variable will decrease the stock return variable by 3.6%. The significance value was 0.611, which is greater than 0.05, indicating that the TATO variable has no significant effect on stock returns. Thus, it can be concluded that the effect of Total Asset Turnover on stock returns is negative and not significant. Based on this regression analysis, hypothesis H1 is rejected.

This result is not in line with the findings of Nikmah et al. (2021), Wahyudi & Deitiana (2020), and Winedar (2020), who state that Total Asset Turnover has a positive and significant effect on stock returns. The TATO ratio reflects how effectively a company manages its assets to generate sales, which is expected to provide positive signals to investors (Gultom et al., 2020). Nevertheless, the findings of this study show the opposite direction, namely negative and not significant. This may indicate that investors are more likely to consider other financial indicators or external factors as signals in making investment decisions.

The Effect of Return on Equity on Stock Return

Based on the results of the multiple linear regression analysis, a coefficient value of 0.279 was obtained, which means that every 1-unit increase in the ROE variable will increase the dependent variable, stock return, by 27.9%. The significance value was 0.000, which is less than 0.05, indicating that the ROE variable has a significant effect on stock returns. Therefore, it can be concluded that the effect of Return on Equity on stock returns is positive and significant. Based on the regression analysis, it can be concluded that H2 is accepted.

These findings support the results of Devi & Artini (2019), Saraswati et al. (2023), and Sinaga et al. (2020), who stated that Return on Equity has a positive and significant effect on stock returns. A high ROE reflects the company's efficiency in managing shareholders' equity to generate profits (Devi

& Artini, 2019). Investors generally consider ROE an important indicator in evaluating a company, as it shows the extent to which a company can generate returns on shareholders' investments. Accordingly, these findings are in line with signaling theory, in which a company's profitability information is viewed as a positive signal by the market, ultimately increasing investor interest in the company's stock.

The Effect of Debt to Equity Ratio on Stock Return

Based on the results of the multiple linear regression analysis, a coefficient value of -0.060 was obtained, which means that every 1-unit increase in the Debt to Equity Ratio (DER) variable would decrease the stock return by 6%. The significance value was 0.348, which is greater than 0.05, indicating that the DER variable does not have a statistically significant effect on stock returns. Thus, it can be concluded that the effect of Debt to Equity Ratio on stock returns is negative but not significant. Based on this regression analysis, hypothesis H3 is rejected.

These findings differ from those of Nawangsari et al. (2021), Malanuwa et al. (2023), and Januardin et al. (2020), who reported that DER has a negative and significant effect on stock returns. The DER ratio reflects the financial risk of a company, where a higher DER indicates that the company may be less stable in generating profits and potentially unable to meet its debt obligations (Pamungkas & Hartanto, 2016). As such, DER can serve as a negative signal to investors, potentially reducing their interest in the company's stock. Although the current study also found a negative relationship between DER and stock returns, this effect was not statistically significant. This lack of significance may suggest that investors do not place heavy emphasis on DER alone when making investment decisions and may instead consider other financial indicators as more reliable signals.

The Effect of Current Ratio on Stock Return

Based on the results of the multiple linear regression analysis, a coefficient value of 0.148 was obtained, indicating that a one-unit increase in the Current Ratio (CR) variable would result in a 14.8% increase in the stock return. The significance value was 0.022, which is less than 0.05. This implies that the CR variable has a statistically significant effect on stock returns. Therefore, it can be concluded that the effect of the Current Ratio on stock returns is positive and significant. Based on the regression analysis results, hypothesis H4 is accepted.

This finding is consistent with those of Thoha (2023), Shufiaziis & Irdianty (2023), and Hutauruk et al. (2022), who reported that the Current Ratio has a positive and significant influence on stock returns. The Current Ratio measures a company's ability to meet short-term obligations without the need to liquidate fixed assets or seek emergency funding (Sihombing, 2021). This indicates that the company is in sound financial condition, thereby enhancing investor confidence and serving as a positive signal. This finding reinforces signaling theory, which posits that profitability ratios can convey positive signals to investors, ultimately increasing their interest in the company's stock.

The Effect of Investor Sentiment on Stock Return

Based on the results of multiple linear regression analysis, the obtained coefficient value of 0.190 indicates that a one-unit increase in the Investor Sentiment variable is associated with an increase in stock return by 19%. The significance value of 0.004 is below the threshold of 0.05, indicating that the Investor Sentiment variable has a statistically significant effect on stock return. Thus, it can be concluded that Investor Sentiment has a positive and significant influence on stock return. Accordingly, hypothesis H5 is accepted. This finding is consistent with previous studies by Fadhel et al. (2022), Suhendah et al. (2022), and P. H. & Rishad (2020).

Investor sentiment reflects the collective attitudes, beliefs, and perceptions of investors toward an asset or the overall market. Positive sentiment can increase demand for stocks, which in

turn may lead to higher stock prices and greater returns (Zhou, 2018). This result supports signaling theory, which posits that investor sentiment may serve as a signal that guides investment decisions.

5. Conclusion and Suggestion

Based on the research conducted on the effect of Total Assets Turnover, Return on Equity, Debt to Equity Ratio, Current Ratio, and Investor Sentiment on stock returns in energy sector companies listed on the Indonesia Stock Exchange during the 2019–2023 period, a total of 58 companies were selected as samples, with five years of observation. It can be concluded that among the five variables examined, Return on Equity, Current Ratio, and Investor Sentiment have a positive effect on stock returns. Meanwhile, the other two variables, Total Assets Turnover and Debt to Equity Ratio have a negative effect on stock returns.

The limitations of this study are as follows:

1. The objects of this research were limited to energy sector companies listed on the Indonesia Stock Exchange, with the observation period covering only five years, from 2019 to 2023.
2. This study primarily focused on financial ratios, namely Total Assets Turnover, Return on Equity, Debt to Equity Ratio, and Current Ratio. Only one external variable—Investor Sentiment—was included in the analysis.

Based on the research that has been conducted, the researcher would like to offer the following suggestions and recommendations for future studies:

1. Future researchers are encouraged to use different types of companies listed on the Indonesia Stock Exchange or even issuers outside the capital market. Extending the research period is also recommended to improve the robustness of the findings.
2. For those utilizing financial ratio variables, it is advisable to consider additional ratios such as Return on Assets, Net Profit Margin, Dividend per Share, and others. Furthermore, future researchers are encouraged to incorporate other external variables, such as exchange rates, gross domestic product, firm value, and so forth.

6. Reference

- Agustine, C. (2021). Analisis Rasio Likuiditas, Rasio Profitabilitas, Dan Rasio Solvabilitas Untuk Menilai Kinerja Keuangan Perusahaan Pada Pt. Surya Toto Indonesia Tbk Periode 2010-2018. *AKADEMIK: Jurnal Mahasiswa Ekonomi & Bisnis*, 1(2), 68–76. <https://doi.org/10.37481/jmeh.v1i2.211>
- Alfian, Y., & Indah, N. P. (2022). Pengaruh Return On Asset (ROA), Current Ratio (CR), Total Asset Turnover (TATO), dan Debt to Equity Ratio (DER) terhadap Return Saham Perusahaan Sub Sektor Aneka Industri Otomotif & Komponen selama pada masa Pandemi Covid-19. *El-Mal: Jurnal Kajian Ekonomi & Bisnis Islam*, 4(3), 839–851. <https://doi.org/10.47467/elmal.v4i4.2156>
- Arikunto Suharsimi. (2010). Prosedur penelitian suatu pendekatan praktik. In *Jakarta: Rineka Cipta* (p. 172). <http://r2kn.litbang.kemkes.go.id:8080/handle/123456789/62880>
- Ass, S. B. (2020). ANALISIS RASIO PROFITABILITAS DAN SOLVABILITAS PADA PT. MAYORA INDAH Tbk. *BRAND Jurnal Ilmiah Manajemen Pemasaran*, 2(2), 195–206. <https://ejournals.umma.ac.id/index.php/brand>
- Baker, M., & Wurgler, J. (2007). Investor sentiment in the stock market. *Journal of Economic Perspectives*, 21(2), 129–151. <https://doi.org/10.1257/jep.21.2.129>
- Beer, F., & Zouaoui, M. (2012). Measuring Stock Market Investor Sentiment. *Journal of Applied Business Research (JABR)*, 29(1), 51. <https://doi.org/10.19030/jabr.v29i1.7555>
- Cevik, E., Kirci Altinkeski, B., Cevik, E. I., & Dibooglu, S. (2022). Investor sentiments and stock markets during the COVID-19 pandemic. *Financial Innovation*, 8(1). <https://doi.org/10.1186/s40854-022->

[00375-0](#)

- De Long, J. B., Shleifer, A., Summers, L. H., & Waldmann, R. J. (1990). Noise Trader Risk in Financial Markets. *Journal of Political Economy*, 98(4), 703–738. <https://doi.org/10.1086/261703>
- Efendi, L. P. P., Aridinanti, L., & Wildani, Z. (2022). Pemodelan Return Saham di Perusahaan Sektor Properti dan Real Estate yang Terdaftar di Bursa Efek Indonesia Tahun 2019. *Jurnal Sains Dan Seni ITS*, 11(1). <https://doi.org/10.12962/j23373520.v11i1.69297>
- Fadhel, R., Adrianto, F., & Alfarisi, M. F. (2022). Analisis Sentimen Investor terhadap kinerja saham syariah di Indonesia selama masa pandemi Covid-19. *Owner*, 6(4), 3579–3591. <https://doi.org/10.33395/owner.v6i4.1183>
- Fang, H., Chung, C. P., Lu, Y. C., Lee, Y. H., & Wang, W. H. (2021). The impacts of investors' sentiments on stock returns using fintech approaches. *International Review of Financial Analysis*, 77(July), 101858. <https://doi.org/10.1016/j.irfa.2021.101858>
- Gultom, D. K., Manurung, M., & Sipahutar, R. Pa. (2020). Jurnal Humaniora Pengaruh Current Ratio , Debt To Equity Ratio , Total Asset Turnover. *Jurnal Humaniora*, 4(1), 1–14.
- Handayani, R., Suhendro, S., & Masitoh W, E. (2022). Pengaruh profitabilitas, debt to equity ratio, price to eraning ratio dan kapitalisasi pasar terhadap return saham. *Inovasi*, 18(1), 127–138. <https://doi.org/10.30872/jinv.v18i1.10397>
- Indriawati, E., Hidayati, A. N., & Fuadilah Habib, M. A. (2022). Pengaruh Net Profit Margin (NPM), Return On Asset (ROA), Earning Per Share (EPS), dan Debt to Equity Ratio (DER) terhadap return saham sektor consumer goods industry pada Bursa Efek Indonesia periode 2017-2021. *Fair Value: Jurnal Ilmiah Akuntansi Dan Keuangan*, 4(9), 3933–3941. <https://doi.org/10.32670/fairvalue.v4i9.1576>
- Intan, M., & Jannah, N. (2018). PENGARUH RASIO LIKUIDITAS, RASIO SOLVABILITAS, DAN RASIO PROFITABILITAS TERHADAP EARNING PER SHARE Yuliasuti Rahayu Sekolah Tinggi Ilmu Ekonomi Indonesia (STIESIA) Surabaya.
- Irawan, J. L. (2021). Pengaruh Return On Equity, Debt to Equity Ratio, Basic Earning Power, Economic Value Added dan Market Value Added Terhadap Return Saham. *Jurnal Akuntansi*, 13, 148–159. <https://doi.org/10.28932/jam.v13i1.2948>
- Januardin, J., Wulandari, S., Simatupang, I., Meliana, I. A., & Alfarisi, M. (2020). Pengaruh DER, NPM, dan PER terhadap Return Saham pada Perusahaan Sektor Property and Real Estate di Bursa Efek Indonesia. *Owner (Riset Dan Jurnal Akuntansi)*, 4(2), 423. <https://doi.org/10.33395/owner.v4i2.251>
- Mahirun, M., & Kushermanto, A. (2018). Capital structure, investment opportunity set, growth sales, firm size and firm value: R&D intensity as mediating. *Quality - Access to Success*, 19(164), 117–122.
- Malanuwa, A., Ibrahim, M., Yakup, Y., & Karundeng, D. R. (2023). Pengaruh Tunjangan Kinerja, Pelatihan, Kedisiplinan Dan Dukungan Organisasi Terhadap Loyalitas Kerja Pegawai. *Journal Economy and Currency Study (JECS)*, 5(1), 105–117. <https://doi.org/10.51178/jecs.v5i1.1369>
- Meliza, M., Novitasari, N., & Citradika, D. P. (2024). PENGARUH STUKTUR MODAL TERHADAP RETURN SAHAM DENGAN SUKU BUNGA SEBAGAI VARIABEL MODERASI. *Jurnal Ilmiah Manajemen, Ekonomi, & Akuntansi (MEA)*, 8(2), 1724–1735. <https://doi.org/10.31955/mea.v8i2.4238>
- Milzam, M., Sigit Taruna, M., & Shofiyuddin, M. (2024). Analisis Keputusan Investasi Gen Z Melalui Literasi Keuangan Dan Risk Tolerance. *Jurnal GeoEkonomi*, 15(1), 14–25. <https://doi.org/10.36277/geoekonomi.v15i1.362>
- Nawangarsari, S., Zakaria, A., & Sumiati, A. (2021). Pengaruh Pengungkapan Corporate Social Responsibility (Csr), Earning Per Shares (Eps), Dan Debt To Equity Ratio (Der) Terhadap Return Saham Pada Perusahaan Sektor Keuangan Yang Terdaftar Di Bursa Efek Indonesia. *Business, Entrepreneurship and Finance*, 1(2), 85–97. <https://doi.org/10.53067/ijebeef>
- Nikmah, L. C., Hermuningsih, S., & Cahya, A. D. (2021). Pengaruh DER, NPM, ROA, Dan TATO Terhadap Return Saham (Study Pada Perusahaan Sektor Industri Otomotif dan Komponen). *Jurnal Ilmiah Manajemen Kesatuan*, 9(2), 21–30. <https://doi.org/10.37641/jimkes.v9i2.450>

- Noviyanti, D., & Ruslim, H. (2021). Pengaruh Struktur Modal, Profitabilitas, Rasio Aktivitas Terhadap Nilai Perusahaan. *Jurnal Manajerial Dan Kewirausahaan*, 3(1), 34. <https://doi.org/10.24912/jmk.v3i1.11285>
- P H, H., & Rishad, A. (2020). An empirical examination of investor sentiment and stock market volatility: evidence from India. *Financial Innovation*, 6(1), 34. <https://doi.org/10.1186/s40854-020-00198-x>
- Pamungkas, Y. A., & Hartanto, A. M. (2016). Analisis Pengaruh Current Ratio (Cr), Debt To Equity Ratio (DER), Net Profit Margin (NPM), Return On Asset (ROA) dan Total Asset Turn Over (TATO) Terhadap Return Saham. *Volume 5, Nomor 4, Tahun 2016, Halaman 1-12 ISSN (Online): 2337-3792 ANALISIS*, 5(4), 1–12. <http://ejournal-s1.undip.ac.id/index.php/dbr>
- Permaysinta, E., & Sawitri, A. P. (2021). Pengaruh Inflasi, Suku Bunga Dan Nilai Tukar Rupiah Terhadap Return Saham. *Jurnal Neraca: Jurnal Pendidikan Dan Ilmu Ekonomi Akuntansi*, 5(1), 41. <https://doi.org/10.31851/neraca.v5i1.5630>
- Pradiana, N., & Yadnya, I. P. (2019). PENGARUH LEVERAGE, PROFITABILITAS, FIRM SIZE, DAN LIKUIDITAS TERHADAP RETURN SAHAM PERUSAHAAN SEKTOR INDUSTRI BARANG KONSUMSI. 8(4), 2239–2266. <https://doi.org/10.24843/EJMUNUD.2019.v8.i4.p13>
- Purnamasari, E., & Japlani, A. (2020). Analisa Kinerja Keuangan Terhadap Return Saham Dengan Inflasi Sebagai Variabel Moderasi Pada Industri Consumer Goods Yang Terdaftar Dalam Indeks Saham Syariah Indonesia (ISSI) Periode 2014-2018. *Fidusia: Jurnal Keuangan Dan ...*, 3, 111–127. <http://fe.ummetro.ac.id/ejournal/index.php/JPK/article/view/534>
- Qotrunnada, E. A., Indarti, I., & Aditya, E. M. (2021). Pengaruh Nilai Tukar, Net Profit Margin, Return on Assets, Dan Inflasi Terhadap Return Saham. *Management and Accounting Expose*, 4(1), 55–63. <https://doi.org/10.36441/mae.v4i1.245>
- Riani, D., Hasnin, H. R., & Ridwan, M. (2023). Pengaruh Return on Investment (ROI), Earning Per Share (EPS), Net Profit Margin (NPM), dan Market Value Added (MVA) Terhadap Return Saham. *Journal on Education*, 5(2), 3290–3301. <https://doi.org/10.31004/joe.v5i2.1001>
- Saputri, I. F., & Ryandono, M. N. H. (2020). Pengaruh Firm Size Dan Profitability Serta Total Assets Turnover Terhadap Return Saham Perusahaan Sektor Industri Barang Konsumsi Yang Terdaftar Pada Indeks Saham Syariah Indonesia Periode 2012-2016. *Jurnal Ekonomi Syariah Teori Dan Terapan*, 6(1), 82. <https://doi.org/10.20473/vol6iss20191pp82-96>
- Saraswati, W., Suratman, S., Fadlilah, A. H., Irdawati, I., & Ernayani, R. (2023). Analisis Pengaruh Return on Equity Dan Net Profit Margin Terhadap Return Saham: Literature Review. *Jurnal Darma Agung*, 31(1), 556. <https://doi.org/10.46930/ojsuda.v31i1.3042>
- Satwiko, R., & Agosto, V. (2021). Economic Value Added, Market Value Added, Dan Kinerja Keuangan Terhadap Return Saham. *Media Bisnis*, 13(1), 77–88. <https://doi.org/10.34208/mb.v13i1.956>
- Sihombing, M. J. T. (2021). Analisis Pengaruh current ratio, return on equity, earnings per share, net profit margin, cash flow from operation to debt, inflasi, suku bunga Bank Indonesia terhadap Return Saham dengan Kebijakan Deviden sebagai Variabel Moderating pada Perusahaan Consu. *Jurnal Mahajana Informasi*, 6(1), 1–13.
- Sitanggang, T. N., Sipahutar, H., & Wau, T. H. (2022). Pengaruh Laba Akuntansi, Total Arus Kas, Net Profit Margin, Dan Tingkat Lverage Terhadap Return Saham Perusahaan Asuransi Yang Terdaftar Di Bursa Efek Indonesia (BEI) Periode 2015-2020. *Journal of Economic, Bussines and Accounting (COSTING)*, 5(2), 833–843. <https://doi.org/10.31539/costing.v5i2.3365>
- Suhendah, R., Ekonomi, F., & Jakarta, U. T. (2022). Pengaruh Covid-19 dan Volume Perdagangan Terhadap Return Saham. *Jurnal Akuntansi*, 14(November), 218–230.
- Thoha, I. (2023). *Analisa Roa , Npm , Tato & Cr Terhadap Return Saham Di Bursa Efek Indonesia*. 4(1), 171–178.
- Vida Mega Pradita, & Dedi Suselo. (2022). Pengaruh Return on Asset (Roa), Return on Equity (Roe) Dan Debt To Equity Ratio (Der) Terhadap Harga Saham Pada Perusahaan Sektor Pertambangan Yang Terdaftar Di Bei Periode 2018 – 2021. *Juremi: Jurnal Riset Ekonomi*, 2(3), 377–386. <https://doi.org/10.53625/juremi.v2i3.3844>

- Wahyudi, M., & Deitiana, T. (2020). PENGARUH CURRENT RATIO, DEBT TO EQUITY RATIO, RETURN ON EQUITY, TOTAL ASSET TURNOVER, DIVIDEN PAYOUT RATIO TERHADAP RETURN SAHAM PADA PERUSAHAAN OTOMOTIF. *Media Bisnis*, 11(2), 155–162. <https://doi.org/10.34208/mb.v11i2.940>
- Wang, W., Su, C., & Duxbury, D. (2021). Investor sentiment and stock returns: Global evidence. *Journal of Empirical Finance*, 63(2), 365–391. <https://doi.org/10.1016/j.jempfin.2021.07.010>
- Winedar, M. (2020). Pengaruh Rasio Keuangan Terhadap Return Saham Pada Perusahaan Ix30 Yang Terdaftar Di Bursa Efek Indonesia Tahun 2018. *Jurnal Analisa Akuntansi Dan Perpajakan*, 4(1), 11–20. <https://doi.org/10.25139/jaap.v4i1.2532>
- Wiyono, G., Maulida, A., & Uran, V. (2022). Pengaruh Retur on Equity, Earning per Share, dan Nilai Tukar terhadap Return Saham Industri Pangan di BEI 2016-2019. *Reslaj : Religion Education Social Laa Roiba Journal*, 5(2), 429–443. <https://doi.org/10.47467/reslaj.v5i2.1531>
- Yanita Sanjaya, M., & Maulida, A. (2022). Analisis Pengaruh Rasio Likuiditas, Solvabilitas dan Profitabilitas terhadap Return Saham. *MES Management Journal*, 2(2), 65–83. <https://doi.org/10.56709/mesman.v2i2.48>
- Yuningsih, V. (2020). Pengaruh net profit margin (NPM) dan earning per share (EPS) terhadap return saham dengan struktur modal sebagai variabel intervening. *Entrepreneurship Bisnis Manajemen Akuntansi (E-BISMA)*, 1(1), 31–41. <https://doi.org/10.37631/e-bisma.v1i1.215>
- Zhou, G. (2018). Measuring Investor Sentiment. *Annual Review of Financial Economics*, 10(1), 239–259. <https://doi.org/10.1146/annurev-financial-110217-022725>
- Brigham, E. F., & Houston, J. F. (2012). *Fundamentals of Financial Management*. Cengage Learning. <https://books.google.co.id/books?id=cZAJAAAQBAJ>
- Hery. (2014). *Analisis kinerja manajemen (cetakan pertama)*. Gramedia Widiasarana Indonesia. <https://books.google.co.id/books?id=glFJDwAAQBAJ>
- Jogiyanto, H. (2022). PORTOFOLIO DAN ANALISIS INVESTASI: Pendekatan Modul (Edisi 2). In *Business & Economics*. Penerbit Andi. <https://books.google.co.id/books?id=s7mBEAAAQBAJ>
- Kasmir. (2008). *Analisis Laporan Keuangan*. Rajawali Pers.
- Nurhayati, S. (2019). *Metodologi Penelitian Praktis Edisi Kedua*. Fakultas Ekonomi Universitas Pekalongan.
- Sakhowi, A. (2011). *Manajemen Keuangan*. Fakultas Ekonomi Universitas Pekalongan. Pekalongan.
- Van Horne, J., & Wachowicz, J. (2008). *Fundamentals of Financial Management 13th Edition*. In *Prentice Hall Financial Times*. Dryden Press. <https://books.google.co.id/books?id=cmg2vgAACAAJ>