
**THE EFFECT OF EARNING PER SHARE (EPS), RETURN ON EQUITY (ROE),
DEBT TO EQUITY RATIO (DER), AND TOTAL ASSET TURNOVER (TATO) ON
STOCK RETURNS (USING COMPANY AGE AND SIZE AS CONTROL
VARIABLES)**

Okta Viani Puspita Sari¹

Universitas Sarjanawiyata Tamansiswa, Yogyakarta, Indonesia

Oktavianips21014@gmail.com

Pristin Primasari²

Universitas Sarjanawiyata Tamansiswa, Yogyakarta, Indonesia

Pristine.primas@ustjogja.ac.id

Johannes Maysan Damanik³

Universitas Sarjanawiyata Tamansiswa, Yogyakarta, Indonesia

Joe.maysan@gmail.com

Abstract

This study aims to analyze the effect of Earnings Per Share (EPS), Return on Equity (ROE), Debt to Equity Ratio (DER), and Total Asset Turnover (TATO) on stock returns in basic and chemical manufacturing companies listed on the Indonesia Stock Exchange for the 2020–2024 period. This study is based on signaling theory and firm value theory to explain the relationship between financial performance and investment decisions. A quantitative method was used using secondary data from annual financial reports. The study sample consisted of 16 companies selected through purposive sampling, with a total of 80 observations. Data analysis used multiple linear regression. The results show that EPS, ROE, DER, and TATO have a positive and significant effect on stock returns. This finding indicates that profitability, capital structure, and asset efficiency are important factors in investment decision-making.

Keywords: Earnings Per Share (EPS), Return on Equity (ROE), Debt to Equity Ratio (DER), Total Asset Turnover (TATO), Stock Return

INTRODUCTION

The capital market in Indonesia, facilitated by the Indonesia Stock Exchange (IDX), plays an important role in national economic development as an investment platform (Dini et al., 2021). Investors generally invest in stocks to obtain maximum returns with acceptable risk levels (Lestari & Cahyono, 2020). Among the various sectors in the IDX, the basic and chemical industry sector is one of the most attractive due to its significant contribution to national exports and employment (Eviyenti, 2021)

Stock return is the gain obtained by investors from stock investment, either in the form of capital gain/loss or dividends (Hertina & Saudi, 2019). Investment decisions are strongly influenced by the financial performance of companies reflected through their financial statements (Eviyenti, 2021)

Previous studies show inconsistent results regarding the effect of financial ratios on stock returns. Therefore, this research is important to provide better insight for investors and corporate management, particularly in the basic industry and chemical sector, by including Company Age and Company Size as control variables (Hertina & Saudi, 2019).

Problem Formulation

Based on the background above, the research problems can be formulated as follows:

1. Does Earnings Per Share (EPS) have an effect on Stock Return?
2. Does Return on Equity (ROE) have an effect on Stock Return?
3. Does Debt to Equity Ratio (DER) have an effect on Stock Return?
4. Does Total Asset Turnover (TATO) have an effect on Stock Return?

Research Objectives

The objectives of this research are:

1. To analyze the effect of Earnings Per Share (EPS) on stock return.
2. To analyze the effect of Return on Equity (ROE) on stock return.
3. To analyze the effect of Debt to Equity Ratio (DER) on stock return.
4. To analyze the effect of Total Asset Turnover (TATO) on stock return.

REVIEW LITERATURE AND THEORETICAL FRAMEWORK

Earnings Per Share (EPS)

EPS is a market ratio that represents the comparison between the net income generated and the price of each outstanding share. A higher EPS generally attracts investors to invest, which in turn raises stock prices and ultimately increases stock returns (Jefri et al., 2022). Eviyenti (2021) finds that Earnings Per Share has a positive effect on stock returns in manufacturing companies listed on the Indonesia Stock Exchange during the 2016–2020 period.

Return on Equity (ROE)

ROE is a profitability ratio that measures the efficiency of a company in utilizing its own capital to generate profits (Musfiro & Yuniati, 2020). The higher the ROE, the better the company's growth prospects and stock price performance (Ramdiani & Irdianty, 2022). This finding supports the first hypothesis and is consistent with (Musfiro & Yuniati, 2020) who document a positive effect of return on equity on stock returns.

Debt to Equity Ratio (DER)

DER is a solvency ratio that compares total debt with total equity. A high DER indicates greater financial risk. However, the use of debt may provide financial leverage

benefits and theoretically affect stock prices (Dini et al., 2021). (Gultom & Lubis, 2021) find that the Debt-to-Equity Ratio has a positive effect on stock returns in telecommunication sub-sector companies listed on the Indonesia Stock Exchange during the 2015–2019 period.

Total Asset Turnover (TATO)

TATO is an activity ratio that measures how effectively a company utilizes its total assets to generate sales or revenue. A higher TATO reflects better asset management efficiency, which is expected to increase stock returns (Ramdiani & Iradianty, 2022). This study is consistent with the findings of (wahyudi & Deitiana, 2020), which show that Total Asset Turnover has a significant effect on stock returns.

Control Variables

1. Company Age: Older companies tend to have better reputation, stability, and more predictable cash flows, which may influence stock returns (Putri & Yulianto, 2023).
2. Company Size: Measured using the natural logarithm of total assets or sales. Larger companies tend to be more stable and have higher stock liquidity, potentially reducing risk and influencing stock returns (Putri & Yulianto, 2023).

Firm size and firm age are included as control variables because larger and more established firms tend to exhibit lower information asymmetry, greater stability, and higher investor confidence.

Signaling Theory

Signaling Theory posits that managers convey private information about firm quality through financial disclosures. Strong earnings, high profitability, and efficient asset utilization serve as positive signals that reduce information asymmetry and attract investors, potentially increasing stock prices and returns. signaling theory emphasizes that published financial information and ratio analysis serve as tools to facilitate investor interpretation of corporate financial reports and guide investment decisions (Safira & Budiharjo, 2021).

Agency Theory

Agency Theory explains conflicts of interest between managers and shareholders. Financial performance ratios such as profitability and leverage reflect managerial efficiency and risk-taking behavior, influencing shareholder wealth and stock market valuation. Financial reporting represents a mechanism through which shareholders assess managerial performance and potential investment returns (Fachrurrozi et al., 2024).

Hypothesis Development

Previous studies document mixed results regarding the impact of profitability, leverage, and efficiency on stock returns. Some studies report positive relationships, while others find insignificant or contradictory effects, indicating unresolved empirical debates.

Based on the theoretical arguments, the following hypotheses are proposed:

H₁: Earnings per share (EPS) has a positive effect on stock returns.

H₂: Return on equity (ROE) has a positive effect on stock returns.

H₃: Debt to equity ratio (DER) has a positive effect on stock returns.

H₄: Total asset turnover (TATO) has a positive effect on stock returns.

RESEARCH METHOD

Data Sources and Collection Methods

This research employs a quantitative approach. The research method aims to explain the causal relationship between independent variables and the dependent variable (Puspitasari, 2023). The data used in this study are secondary data in the form of annual financial statements and performance summaries of manufacturing companies in the basic industry and chemical sector listed on the Indonesia Stock Exchange (IDX). The data were obtained from the official IDX website, www.idx.com, <https://www.investing.com/>, as well as other credible financial data sources during the observation period of 2020–2024.

Population and Sample

The population in this study includes all manufacturing companies in the basic industry and chemical sector listed on the Indonesia Stock Exchange (IDX) during the 2020–2024 period.

The sample was determined using the purposive sampling method, which is a sampling technique based on specific criteria relevant to the research objectives. The criteria applied are as follows:

1. Companies in the Basic Industry and Chemical sector listed on the Indonesia Stock Exchange.
2. Companies that published annual financial statements for the 2020–2024 period.
3. Companies that distributed dividends during the study period.
4. Complete data required for the research variables are available in annual financial report archives.
5. Companies present their financial statements in Rupiah to avoid currency conversion discrepancies.
6. From a total of 73 companies in the Basic Industry and Chemical sector, only 16 companies met the required criteria.

Although the final sample consists of 16 firms, the study utilizes panel data over five years, resulting in 80 observations, which improves estimation reliability.

Operational Variables

Operational definitions of Independent and Dependent Variables aim to provide clarity and measurable descriptions of each variable used in the study, facilitating data collection and analysis.

1. Independent Variables

a. Earnings Per Share (EPS)

A high EPS is often considered an indicator of strong financial health. Investment theory states that an increase in EPS will raise investor demand for a company's shares, which can lead to higher stock prices and consequently increase future stock returns (Ferial FERNIAWAN et al., 2024).

$$EPS = \frac{\text{Net Income After Tax}}{\text{Number of Outstanding Shares}}$$

b. Return on Equity (ROE)

From the shareholders' perspective, ROE is one of the most important financial metrics as it indicates management efficiency in utilizing shareholder capital. A high ROE reflects strong growth prospects and is attractive to investors, consistent with Firm Value Theory (Dini et al., 2021).

$$ROE = \frac{\text{Net Income}}{\text{Total Equity}}$$

c. Debt to Equity Ratio (DER)

DER reflects the financial risk borne by a company. On one hand, debt can generate financial leverage that increases profitability (positive leverage). On the other hand, an excessively high DER may increase default risk and reduce market confidence, affecting stock returns. Its impact depends on the company's ability to generate profits exceeding interest expenses (Adytia & Nursito, 2021).

$$DER = \frac{\text{Total Liabilities}}{\text{Total Equity}}$$

d. Total Asset Turnover (TATO)

A high TATO ratio indicates that management has effectively utilized company assets to generate greater revenue. This operational efficiency potentially increases overall profitability, influencing investor expectations regarding stock value and returns (Ramdiani & Irdianty, 2022).

$$TATO = \frac{\text{Sales}}{\text{Total Assets}}$$

2. Dependent Variable

Stock Return is the gain earned by investors from investing in shares. Returns may consist of two components:

- a. Capital Gain: Profit generated from selling shares at a price higher than the purchase price.
- b. Dividend: Profit distribution to shareholders approved through the General Meeting of Shareholders (GMS).

In the capital market context, investors constantly aim to maximize returns and minimize risks. Investment decisions to buy or sell shares are strongly influenced by the company's fundamental performance, as reflected in financial statements (Shufiazis & Irdianty, 2023).

$$\text{Return} = \frac{P_t - P_{t-1}}{P_{t-1}}$$

Explanation:

Return = stock return

P_t = current stock price

P_{t-1} = previous period stock price

Data Analysis Technique

The purpose of data analysis is to test and prove the influence of the independent variables (EPS, ROE, DER, TATO) on Stock Returns, both partially and simultaneously, as well as to measure how well the model explains the dependent variable. The analysis was conducted using Multiple Linear Regression with the assistance of SPSS 25 software, with the following equation:

$$Y = a - \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4$$

Description:

Y = Stock Return

A = Constant

X1 = Earnings Per Share

X2 = Return on Equity

X3 = Debt to Equity Ratio

X4 = Total Asset Turnover

e = Error term

RESULTS AND DISCUSSION

Descriptive Analysis Test

Table 1
Descriptive Statistics Test Results

	N	Minimum	Maximum	Mean	Std.Deviation
EPS (X1)	80	1,0300000	7,1900000	3,166875000	1,462924584
ROE (X2)	80	1,0000000	5,9100000	3,054250000	1,356771834
DER (X3)	80	,3500000	5,8300000	2,557375000	1,473876954
TATO (X4)	80	1,0100000	6,1900000	3,025750000	1,285982632
RETURN SAHAM(Y)	80	211,1700000	702,6800000	419,6116250	118,9206088
Valid N (listwise)	80				

Source: Data Analysis Result (2025)

From the result of descriptive statistics indicate that Earnings Per Share (EPS) has a mean value of 3.1669 with a standard deviation of 1.4629, Return on Equity (ROE) has a mean of 3.0543 and a standard deviation of 1.3568, Debt to Equity Ratio (DER) has a mean of 2.5574 with a standard deviation of 1.4739, and Total Asset Turnover (TATO) records a mean value of 419.6116 with a standard deviation of 118.9206. In all variables, the mean values exceed their respective standard deviations, indicating that data dispersion is relatively controlled and the mean values adequately represent the overall data distribution.

Classical Assumption Test

Normality Test

Table 2
Normality Test Results

	Unstandardized Residual
Asymp. Sig. (2-tailed)	.200 ^d

Source: Data Analysis Result (2025)

Based on the normality test results, the stock return variable shows a significance value of $0.200 > 0.05$, indicating that the data are normally distributed and suitable for further analysis.

Multicollinearity Test

Table 3
Multicollinearity Test Results

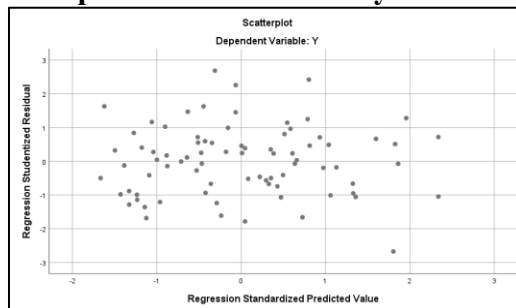
Coefficients ^a			
Model		Collinearity Statistics	
		Tolerance	VIF
1	X1	,343	2,919
	X2	,260	3,849
	X3	,632	1,583
	X4	,348	2,877
a. Dependent Variable: Y			

Source: Data Analysis Result (2025)

The multicollinearity test confirms that all independent variables meet the tolerance (>0.10) and VIF (<10) criteria, indicating that the regression model is free from multicollinearity.

Heteroscedasticity Test

Figure 1
Scatterplot Heteroscedasticity Test Result



Source: Data Analysis Result (2025)

The scatterplot indicates that the data are evenly distributed above and below the zero line, confirming the absence of heteroscedasticity in the regression model.

Autocorrelation Test

Table 4
Autocorrelation Test Results

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,903 ^a	,815	,805	52,49092973	1,839

Source: Data Analysis Result (2025)

Based on the Durbin – Watson Table

Number of observations: n = 80 samples

Number of independent variables: 4 variables (K = 4)

Upper limit value (dU): 1.743

Lower limit value (dL): 1.534

The Durbin–Watson statistic of 1.839 (d) lies between the lower and upper bounds $dU < d < 4 - dU$ ($1.743 < 1.839 < 2.257$), indicating that the regression model is free from autocorrelation.

Hypothesis Test

Multiple Linear Regression Test

Table 5
Multiple Linear Regression Test

	B	t	Sig
Costant	150,900	9,462	,000
EPS	16,965	2,460	,016
ROE	23,350	2,734	,008
DER	17,085	3,389	,001
TATO	33,042	4,242	,000

Source: Data Analysis Result (2025)

The multiple linear regression results yield a constant of 150.900, with positive coefficients for EPS (16.965), ROE (23.350), DER (17.085), and TATO (33.042), indicating that all independent variables positively influence stock returns. So that the multiple linear regression equation can be obtained as follows:

$$Y = 150,900 + (16,965) X_1 + (23,350) X_2 + (17,085) X_3 + (33,042) X_4$$

Partial Test (t-Test)

Table 6
Partial Significance Test (t-Test) Result

Coefficients ^a					
Model	Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	sig
1 (Constant)	150,900	15,947		9,462	,000
X1 EPS	16,965	6,897	,209	2,460	,016
X2 ROE	23,350	8,540	,266	2,734	,008
X3 DER	17,085	5,041	,212	3,389	,001
X4 TATO	33,042	7,789	,357	4,242	,000

Source: Data Analysis Result (2025)

The partial significance test (t-test) is used to examine whether each independent variable has a significant influence on the dependent variable. If the significance value is less than 5% = 0.05 and the degree of freedom (df) = $n-1 = 80-1 = 79$, the t-table obtained is 1.66437. Based on this reference, the test results are concluded as follows:

- Earnings Per Share on Stock Return**
Table 1 shows that the t-value for the EPS variable is 2.460 with a significance value of 0.016. Since t-count (2.460) > t-table (1.66437), EPS (X1) has a significant influence on Stock Return (Y). Thus, H1 is accepted.
- Return on Equity on Stock Return**
The t-value for ROE is 2.734 with a significance value of 0.008. Since t-count (2.734) > t-table (1.66437), ROE (X2) significantly affects Stock Return (Y), and H2 is accepted.
- Debt to Equity Ratio on Stock Return**
The t-value for DER is 3.389 with a significance value of 0.001. Since t-count (3.389) > t-table (1.66437), DER (X3) significantly affects Stock Return (Y).
- Total Asset Turnover on Stock Return**
The t-value for TATO is 4.242 with a significance value of 0.000. Since t-count (4.242) > t-table (1.66437), TATO (X4) significantly affects Stock Return (Y), and H4 is accepted.

Simultaneous Test (F Test)

Table 7
Simultaneous Test (F Test) Result

ANOVA ^a					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	910579,457	4	227644,864	82,621	,000 ^b
Residual	206647,328	75	2755,298		
Total	1117226,785	79			

Source: Data Analysis Result (2025)

Based on the ANOVA test table or F test above, it shows that the significance value is $0.000 < 0.05$. Thus, the F test shows that Earnings Per Share, Return on equity, Debt to Equity Ratio, and Total Asset Turnover simultaneously affect Stock Returns.

Discussion

Effect of Earnings Per Share on Stock Returns

The t-test results indicate that Earnings Per Share (EPS) has a positive and significant effect on stock returns, with a significance value of 0.016 (< 0.05) and a beta coefficient of

0.209; therefore, H1 is accepted. This finding suggests that higher earnings per share serve as a positive signal to investors, leading to increased stock returns.

Effect of Return on Equity on Stock Returns

The results show that Return on Equity (ROE) positively and significantly affects stock returns, as evidenced by a significance value of 0.008 (< 0.05) and a beta coefficient of 0.266; thus, H2 is accepted. This implies that firms with higher profitability relative to equity are more attractive to investors and tend to generate higher stock returns.

Effect of Debt to Equity Ratio on Stock Returns

The analysis reveals that Debt to Equity Ratio (DER) has a positive and significant effect on stock returns, with a significance value of 0.001 (< 0.05) and a beta coefficient of 0.212; therefore, H3 is accepted. This result indicates that optimal leverage can enhance firm performance and positively influence stock returns.

Effect of Total Asset Turnover on Stock Returns

The findings demonstrate that Total Asset Turnover (TATO) positively and significantly affects stock returns, with a significance value of 0.000 (< 0.05) and a beta coefficient of 0.357; thus, H4 is accepted. This suggests that greater asset utilization efficiency contributes to higher stock returns.

Role of Control Variables: Firm Age and Firm Size

Firm Age and Firm Size serve as control variables that influence the relationship between EPS, ROE, DER, TATO, and stock returns, as older and larger firms tend to exhibit greater financial stability, managerial experience, and risk management capacity, resulting in more stable and informative effects on stock returns.

CONCLUSION

Based on the results of the analysis, it can be concluded that manufacturing companies in the basic industry and chemical sector listed on the IDX during 2020–2024 exhibit the following:

1. The first hypothesis is accepted; Earnings Per Share (EPS) positively influences stock returns ($p < 0.016$).
2. The second hypothesis is accepted; Return on Equity (ROE) positively influences stock returns ($p < 0.008$).
3. The third hypothesis is accepted; Debt to Equity Ratio (DER) positively influences stock returns ($p < 0.001$).
4. The fourth hypothesis is accepted; Total Asset Turnover (TATO) positively influences stock returns ($p < 0.000$).

REFERENCES

- Adytia, N. D., & Nursito. (2021). Current ratio , debt to equity ratio. *Journal of Economic, Business and Accounting*, 4(2), 1–10.
- Dini, S., Hulu, Y. A., Zebua, M., & Purba, E. (2021). Pengaruh Total Asset Turnover (Tato), Price Book Value (Pbv), Debt To Equity Ratio (Der) Dan Return on Equity (Roe) Terhadap Return Saham. *Jambura Economic Education Journal*, 3(2), 116–127. <https://doi.org/10.37479/jeej.v3i2.10633>
- Eviyenti, N. (2021). Pengaruh Return On Equity, Debt to Equity Ratio, Earning Per Share, dan Operating Cash Flow terhadap Return Saham pada Perusahaan Industri

- Manufaktur yang Terdaftar di BEI 2016-2020. *Journal of Business and Economics (JBE) UPI YPTK*, 6(2), 56–66. <https://doi.org/10.35134/jbeupiyptk.v6i2.78>
- Fachrurrozi, M. F. P., Ma'sumah, S., & Rossana, L. (2024). Pengaruh Roa, Cr, Tato, Der, Dan Roe Terhadap Return Saham Perusahaan Sektor Transportasi Dan Logistik Yang Terdaftar Di Bei Tahun 2019-2022. *Jurnal Riset Keuangan Dan Akuntansi (JRKA)*, 10, 86–102.
- Ferial Ferniawan, M., 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*, January, 114–130. <https://doi.org/10.26487/akrual.v17i01.32073>
- Gultom, E., & Lubis, K. S. (2021). Analisis Pengaruh Current Ratio, Return on Equity dan Debt to Equity Ratio Terhadap Return Saham Pada Perusahaan Sub Sektor Telekomunikasi yang Terdaftar di Bursa Efek Indonesia Periode 2015-2019. *ARBITRASE: Journal of Economics and Accounting*, 2(1), 12–18. <https://doi.org/10.47065/arbitrase.v2i1.243>
- Hertina, D., & Saudi, M. H. M. (2019). Stock return: Impact of return on asset, return on equity, debt to equity ratio and earning per share. *International Journal of Innovation, Creativity and Change*, 6(12), 93–104.
- Jefri, U., Kartika, R., & Istiqomah, L. (2022). Pengaruh Earning Per Share, Debt To Equity Ratio, Dan Inflation Rate Terhadap Return Saham Pada Perusahaan Property Dan Real Estate. *Jurnal Revenue: Jurnal Ilmiah Akuntansi*, 2(2), 252–258. <https://doi.org/10.46306/rev.v2i2.67>
- Lestari, R., & Cahyono, K. E. (2020). Pengaruh Profitabilitas, Likuiditas Dan Solvabilitas Terhadap Return Saham (Studi Pada Perusahaan Consumer Goods Di Bei). *Jurnal Ilmu Dan Riset Manajemen*, 9(3), 17.
- Musfiro, L. F., & Yuniati, T. (2020). Pengaruh ROA, ROE dan EPS Terhadap Harga Saham pada Perusahaan Food and Beverage Periode 2014-2018. *Jurnal Ilmu Dan Riset Manajemen*, 9(6), 1–18.
- Puspitasari, D. A. (2023). Pengaruh Operating Cash Flow , MVA , EVA , ROI , dan EPS Terhadap Return Saham (Studi Empiris Pada Perusahaan Makanan Dan Minuman Yang Terdaftar di Bursa Efek Indonesia Tahun 2019-2021). *Journal Of Social Science Research*, 3, 8710–8723.
- Putri, C., & Yulianto. (2023). Pengaruh Ukuran Perusahaan, Umur Perusahaan Dan Kinerja Lingkungan Terhadap Harga Saham. *Jurnal Ilmiah Ekonomi Dan Manajemen*, Vol. 1(4), 539–548.
- Ramdiani, D. M., & Iradianty, A. (2022). Pengaruh ROA, ROE, EPS, DER, TATO dan Firm Size terhadap Return Saham Perusahaan Transportasi dan Logistik. *Jurnal Ilmiah Manajemen, Ekonomi, & Akuntansi (MEA)*, 6(2), 884–893. <https://journal.stiemb.ac.id/index.php/mea/article/view/2079>
- Safira, L., & Budiharjo, R. (2021). Pengaruh Return on Asset, Earning Per Share, Price Earning Ratio Terhadap Return Saham. *Akurasi: Jurnal Riset Akuntansi Dan Keuangan*, 3(1), 43–52.
- Shufiazis, R., & Iradianty, A. (2023). Analisis Pengaruh ROA, CR, TATO dan DER Terhadap Return Saham (Studi Kasus Pada Perusahaan Sub Sektor Minyak Dan Gas Yang Terdaftar di Bursa Efek Indonesia (BEI) Periode 2020-2021). *Innovative:*

Journal Of Social Science Research, 3(3), 8379–8392. <https://j-innovative.org/index.php/Innovative/article/view/2606>

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>