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Determinants of Stock Returns: Evidence from Indonesian Listed Companies (2019–2024)

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A B S T R A C T
In order to better understand how basic business issues affected stock returns for Indonesia Stock Exchange businesses from 2019 to 2024, this research sets out to accomplish just that. The ROA, DER, and SIZE of the company are the independent variables that are used. Using panel data collected from 119 firms over a six-year period, the research takes a quantitative method (714 observations). A panel data regression technique known as the Fixed Effects Model (FEM) is used for the study. According to the findings, ROA and DER significantly impact stock returns in a favorable way, while SIZE has a negligible but negative influence. All of the independent factors impact stock returns significantly at the same time. These results point to the fact that in the Indonesian stock market, profitability and capital structure are the main factors that determine stock returns.

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INTRODUCTION

When it comes to the capital market, investors rely on financial statements as the main tool to evaluate a company's performance and future prospects. Economic decision-making is based on financial statements, which provide information on financial status, performance, and cash flows (Beest et al., 2009). In order to understand the behavior of stock returns in the capital market, it is essential to examine a company's basic elements.

One important metric that shows how much money investors made from their investments is the stock return. Market circumstances are only one factor that affects stock returns; other important factors include a company's profitability, capital structure, and size (Fama & French, 1993). In this regard, investors tend to use financial information as the basis for evaluating potential returns and investment risks.

Return on Assets (ROA) is a key performance metric for businesses. Profitability, as measured by return on assets (ROA), is an indication of how well a business is able to use its resources. A higher return on assets (ROA) shows that assets are being used more efficiently to generate profits (Brigham and Houston, 2019). According to empirical evidence, ROA is positively correlated with stock returns (Deangelo et al., 2006; Satapathy et al., 2024). This is because, as said earlier, increased profitability boosts investor confidence, which in turn supports stock price rise. This connection may be less strong when market uncertainty is high, as it was during the COVID-19 pandemic (Goodell, 2020).

Stock returns are affected by a number of factors, including profitability and the financial structure of a firm, which is shown by the Debt to Equity Ratio (DER). A company's leverage and financial risk are both reflected in its DER, which is the ratio of total debt to equity (Goodell, 2020). From a theoretical standpoint in finance, taking on debt has the dual benefit of increasing possible profits via the leverage effect and increasing the likelihood of insolvency (Dewasiri et al., 2019). According to empirical research, DER impacts stock returns because investors' views of a company's risk are influenced by its amount of leverage (Infante et al., 2024). That is why it is crucial for a company's investment appeal that it keeps its capital structure balanced.

Firm size is an additional component that affects stock returns. As a general rule, total assets are the best indicator of a company's size (Halimatussa'diah & Putra, 2021). The operational stability, funding options, and bankruptcy risk of larger enterprises are often better (Astakhov et al., 2019). Also, larger companies usually have better management systems and more investors believe in them, which means their stock returns are more stable (Satapathy et al., 2024).

During the period from 2019 to 2024, the Indonesia Stock Exchange and the Indonesian capital market had substantial volatility in stock returns, which were impacted by shifts in global economic circumstances, such the COVID-19 pandemic and the economic recovery phase (Goodell, 2020). Because of these factors, the market's reaction to a company's fundamentals was not uniform, further complicating the link between ROA, DER, and firm size and stock returns.

When looking at how ROA, DER, and company size affect stock returns, earlier studies have shown contradictions (no study). According to some research, stock returns are positively impacted by firm size and profitability (Deangelo et al., 2006; Astakhov et al., 2019). On the other hand, some studies indicate that leverage might have an insignificant or negative impact on stock returns, depending on economic conditions and firm characteristics (Sari & Berliani, 2024; Chiang et al., 2024). Because of these discrepancies, we need to dig further into the connections between these factors, especially as we go through the various stages of the economy.

In light of the above, it is critical to do this research in order to determine how ROA, DER, and SIZE affect the stock returns of Indonesia Stock Exchange organizations. Investors will be able to use this research as a reference and it will add to the growing body of financial literature.

LITERATURE REVIEW

Signaling Theory

According to Signaling Theory, investors do not have access to the same comprehensive knowledge that corporate management does about the internal state and future prospects of the organization. So, businesses send signals to the market via their financial policies. Financial performance and corporate policy are two examples of these signals that may affect how investors value a business.

The purpose of this analysis is to draw conclusions about a company's health and future prospects based on fundamental indicators, which include ROA, DER, and SIZE (Firm Size). A high return on assets (ROA) is an encouraging measure of a company's performance and development prospects since it shows how well the business is able to turn a profit. More demand for the company's stock is likely to result from this signal's tendency to boost investor confidence.

The capital structure and financial risk level of a corporation are reflected in DER. A high degree of leverage could be seen as an indication of increased danger, but it might also be seen as a sign of development and expansion in some contexts. Consequently, the economic climate and the company's future prospects are crucial factors in how investors perceive DER.

Furthermore, firm size (SIZE) also functions as a signal for investors. Larger firms are generally perceived to have better operational stability, broader access to financing, and lower levels of risk. Investors' faith in a company's capacity to succeed in the long run is heavily influenced by its size.

Thus, according to Signaling Theory, ROA, DER, and SIZE serve as signals that affect investor perception and, in turn, stock returns; they also represent the company's underlying state.

The Philosophy of Agency managerial is delegated managerial responsibilities by shareholders to agents, according to Agency Theory, which describes the dynamic between principals (the owners of a firm) and agents (the managers of that organization). Conflicts of interest may arise in such a

connection due to the fact that the parties involved have divergent goals, according to Jensen and Meckling (1976).

The agency issue arises when management, in its role as agent, does not always prioritise shareholder interests. Consequently, control measures are necessary to guarantee that management prioritizes the principal's interests.

Agency conflicts may be better understood with the use of fundamental factors like ROA, DER, and SIZE. Management's efficiency in turning the company's assets into profit is reflected in the return on assets (ROA). The ability of management to effectively use resources is shown by a high ROA, which in turn boosts investor trust and decreases the likelihood of agency disputes.

At the same time, DER may serve as a tool for managerial discipline and is associated with the company's capital structure. Debt limits management's ability to wastefully spend corporate capital since it establishes responsibilities for interest and principal payments (Jensen, 1986). On the other hand, financial risk increases and shareholder-creditor disputes might arise from debt levels that are too high.

Organizational complexity and agency conflict likelihood are both correlated with firm size (SIZE). Agency expenses may be higher for larger organizations due to their more complex organizational structures. Nevertheless, opportunistic management conduct is less likely to occur in big organizations because to their stronger monitoring systems, which often include external auditors and institutional investor scrutiny.

From an Agency Theory standpoint, ROA, DER, and SIZE are essential metrics since they show the company's financial health and provide light on how to reduce agency conflicts, which has a knock-on effect on investor trust and stock performance.

Conseptual Framework

This study is based on a theoretical framework that serves as a guideline for conducting the research, ensuring that the research process proceeds systematically, in detail, and in a well-directed manner. Theoretical underpinnings of this investigation are detailed below.

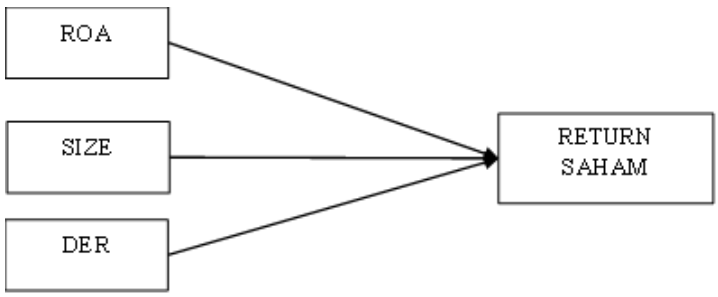

Figure 1. Conceptual Framework

METHODOLOGY

To quantify the relationship between ROA, DER, and SIZE (firm size), this research uses panel data regression analysis to look at how these three variables

affect stock returns. Our data comes from secondary sources and includes both cross-sectional information on companies and time-series data for the years 2019–2024.

Panel data regression models are used to analyze the data, and the Chow, Hausman, and Lagrange Multiplier (LM) tests are used to pick the best model.

To test the hypothesis, we use the t-test to look at how each independent variable affects stock returns in isolation, and the F-test to look at how they all interact with each other. Also, to make sure the model is valid and reliable, we run it through standard assumption tests like heteroskedasticity, multicollinearity, and normality.

Population and Sample

1. Population Research

The word "population" is used to describe the study's intended participants or objects, who are defined as those that have the researcher's chosen qualities (Sugiyono, 2012). All 930 firms that were listed on the Indonesia Stock Exchange (IDX) between 2019 and 2024 make up the population in this research.

2. Sample

According to Sugiyono (2012), a sample is a representation of the size and characteristics of a population drawn from that larger population. Here, we employ purposive sampling, a strategy for picking samples according to predetermined criteria that are in line with our study's aims (Sugiyono, 2016). Here are the criteria that were used to select the samples for this study:

1. Businesses that maintained a continuous listing on the IDX from 2019 to 2024.
2. Businesses whose financial statements are fully operational throughout the study period.
3. Organizations whose stock prices are known as of t-1 (the prior year).
4. Businesses that paid out dividends in cash between 2019 and 2024.
5. Companies with stock return values not equal to zero.

RESULT AND DISCCUSION

Companies that fit the study objectives were obtained using a sample selection method based on the established purposive sampling approach. The following table displays the procedure of screening samples:

Table 1. Samples Criteria

No	Criteria	Violation of Criteria	Sample Size
1	Companies listed on the Indonesia Stock Exchange (IDX) in 2024		930
2	Companies listed consecutively on the Indonesia Stock Exchange (IDX) during the 2019–2024 period	-283	647
3	Companies listed on the Indonesia Stock Exchange (IDX) during the 2019–2024 period	-115	532

4	Companies listed on the Indonesia Stock Exchange (IDX) do not have a t-1 stock price (2018)	-2	530
5	Companies listed on the Indonesia Stock Exchange (IDX) whose stock returns have a value of 0	-18	512
6	Listed companies that distributed cash dividends on the Indonesia Stock Exchange (IDX) during the 2019–2024 period	-393	119

Total Samples: 119
Research Period: 2019–2024 (6 Years)
Total data that can be processed = observation year × sample: 714

The following table shows the outcomes of the sample selection process; 119 firms were considered for the research, providing 714 data points. Following data collection, panel data regression was used for analysis.

We used the Chow test to choose between the Common Effects Model (CEM) and the Fixed Effects Model (FEM) before we estimated the model to see which one was better.

Chou Test

Table 2. Chou Test

Equation: Untitled
Test cross-section fixed effects

Effects Test	Statistic	d.f	Prob
Cross-section F	1.395562	118,592	0.0071
Cross-section Chi-square	175.23628	118	0.0005

According to the findings of the Chow test, the Fixed Effect Model (FEM) is the best model to apply since the cross-section F probability value is 0.0071 < 0.05.

Hausman Test

Table 3 Hausman Test

Correlated Random Effects – Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob
Cross-section random	28.847499	3	0

According to the findings of the Hausman test, the fixed effect model (FEM) is the best choice since the cross-sectional random probability is less than 0.05 (0.0000).

Lagrange Multiplier Test

Table 4. Lagrange Multiplier Test

Null (no rand. effect)	Cross-section	Period	Both
Alternative	One-sided	One-sided	

Breusch-Pagan	0.699246	5.494394	6.193640
	-0.403	-0.0191	-0.0128
Honda	0.836209	2.344012	2.248756
	-0.2015	-0.0095	-0.0123
King-Wu	0.836209	2.344012	2.464472
	-0.2015	-0.0095	-0.0069
SLM	1.058861	2.878932	--
	-0.1448	-0.002	--
GHM	--	--	6.193640
	--	--	-0.0177

Since the cross-section probability value is 0.0128 < 0.05, the Random Effect Model (REM) is the most suitable choice, according to the Lagrange Multiplier test.

Normality Test

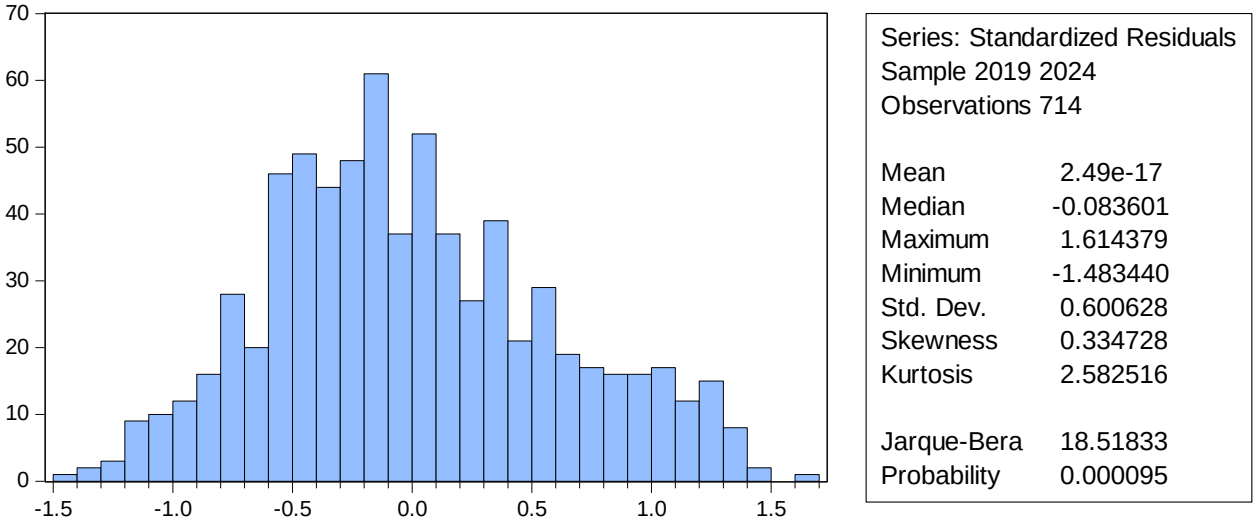

Figure 2. Normality Test

According to the figure, the residuals of the independent variables still do not follow a normal distribution, even after accounting for outliers, as the significance value is 0.000095 < 0.05. Ghozali asserts that while dealing with tiny samples, it is crucial to assume that residuals are normal (2016, p. 168). Another way to look at it is through the lens of the Central Limit Theorem, which says that any dataset with more than 30 observations will have a distribution that is somewhat close to a normal distribution. The data are likely to have a normal distribution, given that 714 observations were used in this investigation.

Multicolinearity Test

Table 5 Multicolinearity Test

	ROA	DER	SIZE
ROA	1	-0.2906	-0.07836
DER	-0.2906	1	-0.18389
SIZE	-0.07836	-0.18389	1

The data do not show signs of multicollinearity since, according to the multicollinearity test findings, the correlation coefficients among the independent variables are less than 0.8.

Multiple Linear Regression Analysis

Table 8. Regression Test

	ROA	DER	SIZE
ROA	1	-0.2906	-0.07836
DER	-0.2906	1	-0.18389
SIZE	-0.07836	-0.18389	1

Stock Return = 1.903912 + 2.195194 ROA + 0.193839 DER − 0.104356 SIZE + e

Here is one way to look at the model:

A. At 2.195194, the regression coefficient of ROA is positive. This means that stock returns will grow by 2.195194 or 219.51% for every unit increase in ROA.
B. DER has a positive regression coefficient of 0.193839. This means that stock returns will rise by 0.193839, or 19.38%, for every one unit increase in DER.
C. A regression coefficient of -0.104356 is given by SIZE. This means that stock returns will fall by 0.104356, or 10.43%, for every one unit rise in SIZE.

Coefficient of Determination Test (R^2 Test)

Table 9 Coefficient of Determination Test

R-squared	0.313198	Mean dependent var	0.009989
Adjusted R-squared	0.172821	S.D. dependent var	0.724704
S.E. ofregression	0.659157	Sum Squared resid	257.2172
F-statistic	2.23112	Durbin-Watson Stat	2.455918
Prob (F-Statistic)	0		

The previously mentioned R^2 test results indicate an Adjusted R-squared value of 0.172821. So, ROA, DER, and SIZE only account for 17.2% of stock returns; the other 82.8% are impacted by factors that were not included in our analysis.

Partial Test

Table 10. Partial Test

Variable	Coefficient	Std.Error	t-Statistic	Prob.
C	1.903912	1.191054	1.598511	0.1105
ROA	2.195194	0.299552	7.328248	0
DER	0.193839	0.038504	5.034243	0
SIZE	-0.104356	0.055779	-1.87088	0.0619

The following conclusions may be derived from the findings of the t-test:

1. ROA's t-statistic is 7.328248, which is more than 1.96, and its probability is 0.0000, which is less than 0.05. This suggests that ROA does impact stock returns, although only to a lesser extent.
2. With a probability value of 0.0000 and a t-statistic value of 5.034243 > 1.96, DER is statistically significant ($p < 0.05$). This shows that DER does impact stock returns, but only to a lesser extent.
3. A t-statistic value of -1.870880 < 1.96 and a probability value of 0.0619, where 0.0619 > 0.05, indicate that SIZE is indeed significant. This suggests that SIZE does not significantly impact stock returns, at least in part.

The Effect of ROA on Stock Returns

ROA has a significance value of 0.0000 and a t-statistic value of 7.328248 > 1.96, with the latter being less than 0.05. Thus, Ha is accepted and H_0 is denied since this shows that ROA does, to a certain extent, significantly affect stock returns. This result agrees with other empirical research that have shown ROA to have an impact on stock returns. According to research (Sefti, 2021), stock returns are impacted by profitability. Stronger stock returns are often associated with highly profitable companies with consistent dividend programs (Deangelo et al., 2006). The findings of Gustiyah and Sihono (2023) and Denis & Osobov (2008), which are corroborated by Astakhov et al. (2019) and Satapathy et al. (2024), indicate that financial parameters, such as profitability, have an impact on stock returns. These results show that return on assets (ROA), which stands in for profitability, is a key factor in understanding the factors that influence stock returns of different companies.

The Effect of DER on Stock Returns

The t-statistic for DER is 5.034243, which is more than 1.96, while the significance value is 0.0000, which is less than 0.05. We reject H_0 and accept Ha since this shows that DER does, at least in part, have a substantial impact on stock returns. Contrary to what El-Masry et al. (2024) found, this result is correct. A balanced capital structure with a certain proportion of debt as a financing source may be valued by investors, especially when cash flow prospects are strong, according to international studies on capital structure in other markets. DER has been found to have a positive effect on stock returns (Sefti, 2021; Satapathy et al., 2024). In contrast, Hermawan et al. (2025) and Meidiyustiani et al. (2022) found that DER may hurt stock returns.

The Effect of SIZE on Stock Returns

The t-statistic for SIZE is -1.870880 < 1.96 and the significance level is 0.0619, which is more than 0.05. This suggests that SIZE does not significantly impact stock returns, at least in part. Several empirical research have shown that larger firms tend to have higher stock returns. According to a quantitative meta-analysis by Astakhov et al. (2019), the impact of business size on stock returns varies between nations. In the case of firms in developing markets, Satapathy et al. (2024) also demonstrate that company size impacts stock returns. The sensitivity of stock returns to economic and geopolitical risks is also affected by business size, according to Helhel & Helhel (2026). These results point to company size as one of the primary variables that contributes to the explanation of stock return variances.

CONCLUSIONS AND RECOMMENDATIONS

The following inferences are possible from the data analysis:

1. The ROA variable has a partial effect on stock returns.
2. The DER variable has a partial effect on stock returns.
3. The SIZE variable does not have a partial effect on tax aggressiveness.

FURTHER STUDY

The limitations of this study include the relatively limited number of independent (X) variables, which may not fully capture the complexity of the model, as well as the absence of a Z variable (moderating or mediating variable).

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