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Determinants of stock returns of property and real estate companies

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Abstract
Stock returns are financial gains and losses obtained by investors due to their willingness to tolerate uncertainty and possible losses arising from their investments. Investment has the main goal of making a profit. The study aims to analyze and assess the influence of ROA, DER, EPS, and firm size on stock returns. The focus of this research is on property and real estate sector companies listed on the Indonesia Stock Exchange (IDX) from 2019 to 2022. The sample amounted to 15 companies using purposive sampling. The annual report from 2019 to 2022 is the secondary data used in this study. The study utilizes multiple linear regression analysis. The results of the study stated that ROA and DER affect stock returns, while EPS and firm size did not affect stock returns.

Abstrak
Pengembalian saham adalah keuntungan atau kerugian finansial yang diperoleh investor karena kesediaan mereka untuk mentolerir ketidakpastian dan kemungkinan kerugian yang timbul dari investasi mereka. Investasi memiliki tujuan utama untuk menghasilkan keuntungan. Penelitian ini bertujuan untuk menganalisis dan menilai pengaruh ROA, DER, EPS, dan ukuran perusahaan terhadap pengembalian saham. Fokus penelitian ini adalah pada perusahaan sektor properti dan real estat yang terdaftar di Bursa Efek Indonesia (BEI) dari tahun 2019 hingga 2022. Sampel tersebut berjumlah 15 perusahaan yang menggunakan purposive sampling. Laporan tahunan dari tahun 2019 hingga 2022 adalah data sekunder yang digunakan dalam penelitian ini. Penelitian ini menggunakan analisis regresi linier berganda. Hasilnya menyatakan bahwa ROA dan DER mempengaruhi pengembalian saham, sedangkan EPS dan ukuran perusahaan tidak mempengaruhi pengembalian saham.

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Firm Size.

Kata kunci
Return Saham;
Return on Asset (ROA);
Debt to Equity Ratio (DER);
Earning Per Share (EPS);
Firm Size.

1. Introduction

The pace of business development in Indonesia has accelerated significantly in the current era of globalization, to support the growth of a country, governments, entrepreneurs, and investors rely heavily on the business economy. The importance of the economy in the business world makes companies in various sectors must be able to compete to develop and improve quality, one of which is by investing. Investment refers to the act of allocating cash to various assets for a certain period of time with the aim of generating financial returns. The main goal of investment is to achieve profit. Before making an investment selection, investors must understand the criteria that can be the benchmark for making these decisions in order to get the expected return. Annual reports serve as a valuable source for investors to assess the financial performance of the companies in which they participate, providing important information for evaluation purposes (See also Julius 2013). Stock return is the financial gain or loss that investors get because of their willingness to tolerate uncertainty and possible losses arising from their investment. Stock return refers to the expected financial return that investors want to achieve by investing their funds in equity (Claassen, Dam, and Heijnen 2023). The return on this investment can be categorized into two forms of return: yield, which represents the income earned from the stock, and capital gain, which represents the profit earned from the sale.

Stock returns have garnered significant attention within the global financial sector. Notably, the stock market in emerging economies, particularly in Africa, has gained prominence for advancing beyond its primary function of serving as an alternative capital source for investments. It has taken a significant step towards risk diversification, contributing to opportunities for economic growth and business development on the continent (Adekunle et al. 2020). The correlation between high stock returns and elevated risk is notable, given that many investors, being risk-averse, are inclined to steer clear of the market due to uncertainties surrounding return expectations. The Nairobi Stock Exchange (NSE) has become the center of the stock market, precisely the financial market in East and Central Africa. The Nairobi Stock Exchange (NSE) is one of the most successful exchanges in Africa (Olweny 2014). The return of stocks that are less familiar to investors will be higher than stocks that are more familiar to investors (Create 2022). The property and real estate business is in high demand by investors and the general public as it is well-known as a stable and profitable long-term investment. Indonesia's GDP growth is most influenced by the housing, industrial estate, and office subsectors with around 77% of the total investment allocated to the property sector. This confirms the crucial role of these sectors in influencing Indonesia's economic growth (Setiawati 2023). Indonesia's property market currently consists of 60% end-users who intend to occupy the homes they purchase themselves.

Stock return represent the gains derived by companies, individuals, and institutions based on the outcomes of their investment strategies. The connection between risk and return is widely recognized in investments; specifically, a high level of risk is associated with a correspondingly high return (profit), while a low return (profit) is typically linked to lower risk. According to (Sahara, Wiyono, and Sari 2023) stock returns are the results of profits or losses obtained by investing in the capital market within a certain period of time. Company performance can also be seen from the annual financial statements published by the issuing company. Therefore, by publishing annual financial reports, investors can find out the series of developments of issuers that are used to make decisions such as buying, selling, and investing shares owned in a company (Sutriani 2014). Financial ratios can describe the health of a company that needs to be considered when making an investment. Stock returns refer to the financial gains that investors can make from the capital they invest. Investors must realize that in addition to potential gains, there is also a risk of loss. The investor's capacity to evaluate the stock price can affect the profit or loss which in turn can affect the stock return (Januardin et al. 2020).

2. Method

According to signal theory, positive financial reports serve as an indication or signal that the company is performing effectively. The signals given by the company can be in the form of company

performance in financial or non-financial terms. Good signals given will be responded to by investors or other parties and can influence decision making. (Salsabilah and Amanah 2021). Signal theory states that there are two parties involved, the first party is an internal party such as management who functions as the recipient of the signal . Signaling theory explains that companies have an obligation to provide information about financial statements to outside parties. Signal theory describes how a company should signal to investors or other users of financial statements. Before investing in a company, investors need information on the company they will invest in to find out whether the company is in good condition or not (Kusumawardani 2022).

The research conducted in this study is of a quantitative research. As per (Prof. Dr. Sugiyono 2019), quantitative research is a methodology grounded in the philosophy of positivism, utilizing research instruments, and employing quantitative or statistical data analysis to test pre-established hypotheses. The data utilized in this study is derived from secondary sources, specifically financial statements of property and real estate companies spanning the years 2019-2022. Secondary data refers to information not directly obtained from the company but acquired from alternative sources or documents. These data sources were accessed through the official website of the Indonesia Stock Exchange at www.idx.co.id. Sample selection employed the purposive sampling method, signifying that the chosen sample meets specific criteria set by the researcher after careful consideration. The analytical methodology employed involves conducting multiple linear regression analysis, and this process is carried out using the computer program SPSS Version 21.

Table 1. Sample Selection

	Sample Criteria	Amount
1	Property and Real Estate companies listed on the Indonesia Stock Exchange (IDX) consecutively during the period 2019-2022	65
2	Property and Real Estate companies that did not submit financial reports during the 2019-2022	(14)
3	Property and Real Estate companies that do not have complete data	(8)
4	Property and Real Estate companies whose financial statements do not use rupiah currency	(0)
5	Property and Real Estate companies that experienced losses during the 2019-2022	(28)
	Samples based on criteria	15
	Observations for 40 years = 15 x 4	60
	Outliers	(10)
	The amount of data observed	50

Based on the table above, the number of samples for this study was 15 companies with sampling in a span of 4 years (2019-2022). The0number0of0research samples is 15 x 4 = 60 data. From the results of the sample selection above, there are 65 companies listed on the Indonesia Stock Exchange consecutively during 2019-2022, 14 companies that did not submit their financial reports in full during 2019-2022, 8 companies that did not submit their financial reports in full and 28 companies that experienced losses during 2019-2022.

3. Results and Discussion

3.1. Result

Table 2. Descriptive Statistical Analysis

Variable	N	Min0	Max	Mean	Std. Deviation
ROA	50	0,0010	0,1997	0,051352	0,0418698
THE	50	0,0857	3,7882	0,743846	0,7570915
EPS	50	0,3567	1007,50	160,21444	264,0787854
Firm Size	50	14,3496	17,9899	16,225328	1,0412037
Stock Return	50	-0,4188	0,4474	-0,036402	0,1846853

The test indicates the following descriptive statistics for the variables:

1) ROA varies from a minimum of 0.0010 to a maximum of 0.1997, with an average of 0.051352 and a standard deviation of 0.0418698.
2) DER ranges from a minimum of 0.0857 to a maximum of 3.7882, displaying a mean of 0.743846 and a standard deviation of 0.7570915.
3) EPS spans from a minimum value of 0.3567 to a maximum of 1007.50, with an average of 160.21444 and a standard deviation of 264.0787854.
4) Firm size varies from a minimum of 14.3496 to a maximum of 17.9899, indicating a mean of 16.225328 and a standard deviation of 1.0412037.
5) Stock returns have a minimum value of -0.4188, a maximum of 0.4474, with a mean of -0.036402 and a standard deviation of 0.1846853.

Table 3. Normality Test Results

Variable	Mr.	Condition	Description
Asymp.sig (2-tailed)	0,956	> 0,05	Data is normally distributed

The above test using the Kolmogrov-Smirnov method gives a significance value < 0.05, meaning that the data collected in this study shows a normal distribution.

Table 4. Multicollinearity Test Results

Variable	Tolerance	Condition	VIF	Condition	Description
ROA	0,735	> 0,10	1,360	< 10,00	Multicollinearity free
THE	0,625	> 0,10	1,600	< 10,00	Multicollinearity free
EPS	0,851	> 0,10	1,175	< 10,00	Multicollinearity free
Firm Size	0,833	> 0,10	1,200	< 10,00	Multicollinearity free

All variables in the multicollinearity test above have Tolerance > 0.10 while VIF < 10.00, indicating that there is no occurrence of multicollinearity among the variables.

Table 5. Heteroscedasticity Test Results

Variable	Mr.	Condition	Description
ROA	0,936	> 0,05	Heteroscedasticity free
THE	0,728	> 0,05	Heteroscedasticity free
EPS	0,719	> 0,05	Heteroscedasticity free
Firm Size	0,542	> 0,05	Heteroscedasticity free

Test with the Spearman's rho test method discussed earlier, it is known that all variables have a significant value. Based on the significance criterion of 0.05, the results obtained for all variables in this study do not have heteroscedasticity.

Table 6. Autocorrelation Test Results

Variable	Mr.	Condition	Description
Asymp. Sig. 2-tailed	0,5680	> 0,050	Autocorrelation does not occur

The test was conducted using the Run Test approach. The two-sided value exceeds 0.05, meaning that the analysis shows the results of no autocorrelation.

Table 7. Multiple Linear Regression Test Results

Variable	B
(Constant)	0,539155
ROA	-1,868514
THE	-0,104476
EPS	0,000116
Firm Size	-0,025911

The model for the multiple linear regression equation is as follows:

Rt = 0,539155 – 1,868514 ROA – 0,104476 DER + 0,000116 EPS – 0,025911 FS + e

1) The constant number of 0.539155 indicates that when ROA, DER, EPS, and firm size are all, the stock return is equal to 0.539155.
2) The ROA coefficient is -1.868514, which means that an increase in ROA by 1 unit causes stock returns to decrease by -1.868514.
3) The DER coefficient is -0.104476, which means that an increase in DER by 1 unit causes stock returns to decrease by -0.104476.
4) The EPS coefficient is 0.000116, meaning that an increase in EPS by 1 unit causes stock returns to increase by 0.000116.
5) The firm size coefficient of -0.025911 shows that an increase in firm size by 1 unit causes stock returns to decrease by -0.025911.

Table 8. Model Feasibility Test Results (FTest)

Fcal	Ftabel	Mr.	Condition	Description
4,4540	> 2,580	0,040	< 0,050	Decent Model

The table above presents the Fcount result of 4.454, while the Ftable value is 2.58. These values are obtained from the statistical table using the formula df = n-k-1 (50-4-1). The Fcount value of 4.454> from the Ftable value of 2.58 thus indicating statistical significance. In addition, Sig. 0.004 < 0.05, meaning that the combination of ROA, DER, EPS, and firm size collectively affects stock returns.

Table 9. Hypothesis Test Results (t Test)

Hypothesis	Calculation	ttable	Mr.	Condition	Description
H1	-2,879	-2,012	0,006	< 0,05	Accepted
H2	-2,683	-2,012	0,010	< 0,05	Accepted
H3	1,209	-2,012	0,233	< 0,05	Rejected
H4	-1,057	-2,012	0,296	< 0,05	Rejected

Hypothesis testing states the t value on ROA -2.879. The value of -count (-2.879) < -table (-2.012) and the value of Sig. (0.006) below 0.05, the conclusion is that Ha is accepted while Ho is rejected, meaning ROA has an effect on stock returns.

Hypothesis testing states the t value of DER -2.683. The value of -count < -table (-2.683 < -2.012) and the significance value is below 0.05 (0.010 < 0.05), the conclusion is Ha is accepted while Ho is rejected, meaning that DER has an influence on stock returns.

Hypothesis testing states the t value on EPS is 1.209. The results showed that tcount (1.209) < ttable (2.012), and the Sig value (0.233) exceeds the significance level of 0.05, the conclusion is Ha is rejected while Ho is accepted, meaning that EPS has no effect on stock returns.

Hypothesis testing states the t value of firm size -1.057. The results of the study concluded that the firm size value> than the -table value (-1.057> -2.012) and Sig. > 0.05 (0.269 > 0.05), the conclusion is that Ha is rejected while Ho is accepted, meaning that firm size has no effect on stock returns.

Table 10. Test Results of the Coefficient of Determination (Adjusted-R Square)

Adjusted-RSquare	Condition
0,220	The variables Return on Asset (ROA), Debt to Equity Ratio (DER), Earning Per Share (EPS), and Firm Size have an influence on the dependent variable Stock Return by 22%.

The coefficient of determination test shows that about 22% of stock return variability can be caused by the various variables analyzed in this study. Then about 78% of stock return variability can be caused by other factors that are not taken into account in this research analysis.

3.2. Discussions

3.2.1. The Effect of Return on Asset (ROA) on Stock Returns

The results of the research, as determined by hypothesis testing (t-test), reveal that ROA is characterized by a value of -2.879. Upon conducting a partial t-test, it is observed that ROA has a -count less than the -table (-2.879 < -2.012), and the Sig. value is less than 0.05 (0.006 < 0.05). ROA partially influences stock returns, leading to the acceptance of hypothesis H1. Typically, a high ROA indicates robust financial performance, potentially contributing to increased stock prices and capital gains for investors. However, the study's findings indicate a negative ROA, suggesting inefficiency in utilizing assets to generate profits, which in turn can impact both the company's financial performance and stock prices. This inefficiency may diminish the potential for capital gains and yields for investors. Moreover, a negative ROA may signal higher financial risk for the company, influencing investor decisions and stock prices. The adverse impact of a negative ROA can make the company less appealing to investors, who may opt for investments in other companies with superior performance. Consequently, concerns about the company's financial performance can lead to a decrease in stock returns.

3.2.2. The Effect of Debt to Equity Ratio (DER) on Stock Returns

The research results, derived from the hypothesis test (t-test), indicate that the DER is marked by a value of -2.683. Upon conducting a partial t-test, it is observed that the DER has a -count less than the -table (-2.683 < -2.012), and the Sig. value is less than 0.05 (0.010 < 0.05). This signifies that the DER has a partial impact on stock returns, leading to the acceptance of hypothesis H2. The DER serves as a metric to gauge a company's ability to utilize debt for operational funding. The study's findings reveal a negative DER, indicating that as a company's debt increases, so does its financial risk. Companies with a high DER may heavily rely on debt for operational activities, potentially adversely affecting company performance. This heightened financial risk becomes particularly concerning if the company faces challenges in repaying its debts. Elevated financial risk may prompt investors to reduce their portfolio or decrease their investment in the company, resulting in diminished stock returns and eroding investor confidence in the company's investment prospects.

3.2.3. The Effect of Earning Per Share (EPS) on Stock Returns

The research results, based on hypothesis testing (t-test), reveal that EPS is characterized by a value of 1.209. Upon conducting a partial t-test, it is determined that EPS has a tcount less than the ttable (1.209 < 2.012), and the corresponding Sig value is greater than 0.05 (0.233 > 0.05). This implies that EPS does not have a significant partial impact on stock returns, leading to the rejection of hypothesis H3. Contrary to the expectation that higher EPS would correlate with elevated stock prices and investor returns, the study's results indicate no such effect. The study suggests that the magnitude of EPS does not influence stock returns. While investors generally favor higher EPS due to the perceived reduction in risk, this study reveals that investors may not always prioritize or consider EPS if it is deemed too small. Instead, investors take into account the company's growth potential. Even if EPS is low, investors may overlook this factor if they perceive a strong potential for future growth in the company.

3.2.4. The Effect of Firm Size on Stock Returns

The results of the hypothesis testing (t-test) in this study reveal that the firm size exhibits a value of -1.057. Further examination through partial t-test indicates that the firm size has a -count greater than the -table (-1.057 > -2.012), with a corresponding Sig. value exceeding 0.05 (0.296 > 0.05). This implies that, partially, firm size does not have a significant impact on stock returns, leading to the rejection of hypothesis H4. Firm size, representing the magnitude of a company based on its total asset value, traditionally suggests that larger companies possess greater total assets. However, the study's findings contradict this expectation, indicating that firm size does not influence stock returns. Consequently, investors may not take company size into account when making stock purchase decisions. The study underscores that a company's growth is not solely determined by its size; effective management of assets is crucial. Without proper management, even a large company may fail to generate substantial profits, leading to suboptimal stock prices. As a result, the size of a company's assets alone cannot predict its profitability or the returns investors may receive, leading to a lack of investor interest in considering asset size when making investment decisions.

4. Conclusions

This research aims to assess and examine the impact of ROA, DER, EPS, and firm size on stock returns. The data utilized is derived from secondary sources, focusing on 65 property and real estate firms listed on the Indonesia Stock Exchange from 2019 to 2022. The sample comprises 15 companies selected through purposive sampling. The analytical approach employed in this investigation involves multiple linear regression analysis. The findings of the study reveal the following: (1) ROA is found to have a negative impact on stock returns. (2) DER is observed to exert a negative influence on stock returns. (3) EPS is determined to have0no0significant effect0on0stock returns. (4) Firm size is also established to have no discernible impact on stock returns.

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