

Determinants of Stock Returns: The Moderating Role of Company Size (Empirical Study of Property and Real Estate Companies Listed on the Indonesian Stock Exchange 2019-2023)

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ABSTRACT

This research aims to test and analyse the influence of return on assets (ROA), net profit margin (NPM), debt-to-equity ratio (DER), and inflation on property and real estate company stock returns in 2019–2023. The research approach uses the method of quantitative research with panel data regression models using Eviews 12.0 software. The population in this research is property sector companies registered on the IDX in 2019–2023. The sampling technique used is purposive sampling. The research results show that there is no significant influence between return on assets (ROA) and stock returns; there is a positive but not significant relationship between net profit margin (NPM) and stock returns; there is no significant relationship between debt-to-equity ratio and stock returns; and inflation has a significant influence on stock returns of property and real estate companies in 2019–2023.

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INTRODUCTION

The Indonesia Stock Exchange (BEI) is one of the trusted institutions for investors and issuers to facilitate stock trading (Noraida et al., 2022). The Indonesian Stock Exchange not only plays a role in facilitating the interests of investors and issuers but also provides the latest information regarding stock exchange developments by displaying data on share price performance movements of listed companies (Jauhari, 2018). The main indicator that reflects the performance of the IDX and is often used by investors to see developments in stock prices on the IDX is the Composite Stock Price Index (IHSG) (Noraida et al., 2022). The JCI movement is one of the important indicators that investors use before making investment decisions, apart from company fundamentals. This is because the IHSG contains share price movements of all companies listed on the IDX (Zakaria et al., 2018). Stock returns are the results obtained from stock investments. Stock returns can be realised returns that have occurred or expected returns that have not yet occurred but are expected to occur in the future. Share returns obtained by investors can be influenced by external factors and internal

factors of the company. The higher the IHSB, the maximum stock return, and the lower the stock risk level. This illustrates that the IHSB has a positive effect on stock returns.

One sector that experiences fluctuations in the IHSB and is affected is the property and real estate sector. The property and real estate business is a business or business activity carried out by individuals or companies engaged in property ownership that can be used as an asset in the form of land, buildings, and all the facilities and infrastructure contained therein as one unit. This property business can be understood as a business that operates in the field of buying and selling or renting land and various aspects such as designing land and the like. Some of the things that are currently popular in Indonesia are, of course, types of residential property, such as houses or housing, flats or apartments, buildings or villas. Apart from the property products for residence or residence above, there are also several other property products. The property product can be seen from its purpose. These include commercial property, industrial property, and special purpose property.

Apart from the products, the property and real estate sectors The housing sector involves many economic actors. Starting from developers, contractors, construction workers, investors (homeowners), renters, and financial institutions. The influence of the housing sector on the economy is also relatively large. The multiplier effects arising from activities in the housing sector are very diverse. Many economic activities have grown along with the growth of the housing sector, from providing raw materials to the steel industry. However, since the economic problems caused by the pandemic, companies have had difficulty increasing company value. This statement is reflected in the performance of share prices in the property and real estate sector in 2019-2023, which experienced a fluctuating or up-and-down trend in the graph below. Especially during the 2019 and 2020 period or before and during the pandemic. It was recorded that in 2020 this sector experienced a decline in share prices of up to -21.23% from the previous year, namely 12.54%. The decline in share prices in the property and real estate sectors was the main influence that weakened the index.

The property sector is also considered a multiplier effect, or a sector that has a double impact on the growth conditions of more than hundreds of other industrial sectors during the COVID-19 pandemic. The multiplier effect is proven when this sector succeeds in building housing infrastructure; it will quickly have an impact on other growth. Such as industrial materials needed during construction, such as cement, roof tiles, iron, wood, and others. So it has become one of the government's focusses in accelerating national economic recovery during the COVID-19 pandemic. Financial data such as balance sheets, profit and loss reports, cash flow reports, and other reports can be obtained from the company's financial reports. The function of financial ratio analysis for investors is to see whether the company that will be used for investment has a good financial condition or not, so that investors can determine which investment is the best. A company can be said to be in good condition if it has indicators such as a smooth liquidity ratio, high profitability, high solvency, and a high activity ratio.

The author uses fundamental analysis to analyse stock returns because fundamental analysis is a scientific study of financial ratios. This ratio is used as a measuring tool to determine the financial position and success of a company, which can be used as a guide for decision-making. According to Kasmir (2014), financial ratios are the activity of comparing the numbers in financial reports. Comparisons can be made between one component and another in one report. Analysis of financial ratios is actually only a tool in investing to analyse possible returns on investments made. Investors want a higher return on what they have invested. Stock return is the level of profit enjoyed by investors on an investment they make (Robert Ang, 2001). Many studies show the influence of financial ratios on stock returns. Thus, this research aims to analyse Determinants of Stock Returns: The Moderating Role of Company Size (Empirical Study of Property and Real Estate Companies Listed on the Indonesian Stock Exchange 2019–2023).

THEORETICAL BASIS AND DEVELOPMENT OF HYPOTHESES

Multi Factor Model

The multi-factor model was developed by Fama and French (1993) based on the results of observations and tests on shares on the American stock exchange, which were selected according to company size and value. Furthermore, both of them introduced a three-factor model: market risk, small minus big (SMB), or the difference between the return of a small capitalisation portfolio over a large capitalisation portfolio, and high minus low (HML), or the difference between the return of a portfolio with a high book-to-market ratio over the book-to-market ratio. low, formulated:

$$R_{it} - R_{ft} = \alpha_i + \beta_i(R_{mt} - R_{ft}) + \beta_i \text{SMB}_t + \beta_i \text{HML}_t$$

R_{it} = return of a share that will be used,

R_{ft} = This free risk is the interest rate risk in period t,

R_{mt} = is the market return for period t,

SMB_t = is the size factor (Small Minus Big) in period t,

HML_t = is the book to market factor (High Minus Low) in period t.

The Fama-French model is very popular among financial academics and practitioners because of its better ability to explain movements and variations in stock returns compared to the CAPM, which uses only one market risk factor. However, this model has also faced criticism, mainly because it is not always consistent across all markets or time periods. Some researchers also suggest that there may be other factors to consider that are responsible.

Arbitrage Pricing Theory

Arbitrage Pricing Theory (APT) is a theory formulated by Stephen Ross in 1976. Arbitrage Pricing Theory (APT) explains how stock prices are influenced by company-specific and macroeconomic factors. This theory suggests that several macroeconomic variables, such as inflation, GDP growth, and changes in the yield curve, play a critical role in determining security prices. The APT model that Ross developed is very flexible, allowing investors to customise the model to include factors specific to their market context, for example, oil prices in oil-exporting or importing countries.

APT provides a framework for understanding how different types of risk, reflected through various macroeconomic factors, affect expected returns on assets. This model is especially valuable for investors who want to diversify their portfolio or manage risk in certain economic conditions. The APT model assumes that stock returns are a linear function of various macroeconomic factors, and changes in each factor are expressed by the beta coefficient of each factor and not by unique risk. The title raised in this research certainly cannot be separated from previous research as a basis for compiling a framework or direction for this research. There are several studies that examine the level of risk in relation to the level of profit.

Return on Asset (ROA)

According to Kasmir (2014), return on assets (ROA) is a ratio that shows the results of the number of assets used in the company. Meanwhile, according to Fahmi (2012:98), the return on assets (ROA) looks at the extent to which the investment that has been made is able to provide a profit return as expected and whether the investment is actually the same as the company's assets invested or placed. The greater the ROA value, the better the company's performance, because the rate of return on investment is greater. ROA is formulated as follows:

$$\text{ROA} = \frac{\text{Profit After Tax}}{\text{Total Assets}} \times 100\%$$

Net Profit Margin (NPM)

Kasmir (2012) Net profit margin (NPM) is the relationship between net profit after tax and sales, showing management's ability to run the company until it is successful enough to recover or

control the cost of merchandise or services, operating costs, depreciation, loan interest, and taxes. Net profit margin is the hope for achieving sustainable company profits. The greater this ratio, the better the company's ability to earn high profits. The following is the NPM formula:

$$\text{NPM} = \frac{\text{Net Profit After Tax}}{\text{Net Sales}} \times 100\%$$

Debt to Equity Ratio (DER)

Kasmir (2015) stated that the debt-to-equity ratio is a ratio used to assess debt versus equity. This ratio is found by comparing all debt (current debt and non-current debt) with equity. Based on the statement above, it can be said that the debt-to-equity ratio (DER) measures the percentage of liabilities in the company's capital structure, where this ratio functions to determine the amount of funds for creditor guarantees. DER can be calculated using the following formula:

$$\text{DER} = \frac{\text{Total Debt}}{\text{Total Capital}} \times 100\%$$

Inflation

Mishkin (2008) states inflation as a continuous increase in price levels, affecting individuals, entrepreneurs, and the government. According to the Bank Indonesia Dictionary, inflation is simply defined as a general and continuous increase in prices. An increase in the price of just one or two goods cannot be called inflation unless the increase extends (or results in an increase in prices) to other goods. Inflation stability is a prerequisite for sustainable economic growth, which ultimately provides benefits for improving people's welfare.

Size Firm

Company size is the size of a company, which can be seen from how many assets the company owns (Wimelda and Marlinah, 2013). Company size is reflected in the size and size of a company as seen from total assets, total sales, average total sales, and average total assets. Company size can be calculated using the following formula:

$$\text{Size} = \text{Ln} (\text{Total Company assets})$$

Stock Returns

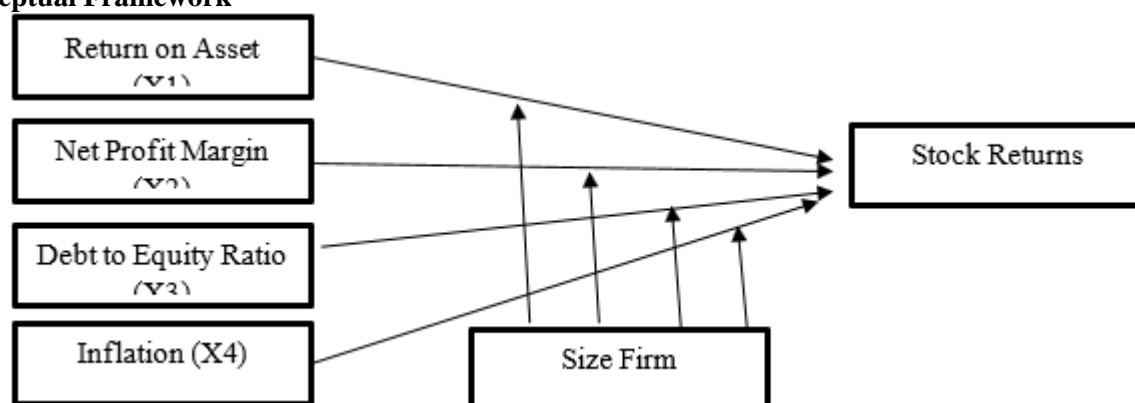
Stock return is the level of profit enjoyed by investors on a stock investment (Ang, 1997). According to Tandelilin (2010), the basis for decisions is the expected level of return; the main reason people invest is to gain profits. In the context of investment management, the level of investment profit is referred to as the return. It is very natural for investors to demand a certain level of return on the funds they have invested. Systematically, the calculation of stock returns, according to Brigham and Houston (2009), is as follows:

$$\text{Stock returns} = \frac{\text{Pt} - \text{P0}}{\text{P0}}$$

information:

Pt = Price, price for time t

P0 = Price, price for previous times

Conceptual Framework**Figure 1: Conceptual Framework****Research Hypothesis**

Based on the description above, the hypothesis in this research is:

- H1 : ROA influences stock returns
- H2 : NPM has an influence on stock returns
- H3 : DER influences stock returns
- H4 : Inflation affects stock returns
- H5 : Company size moderates the influence of NPM on stock returns
- H6 : Company size moderates the influence of NPM on stock returns
- H7 : Company size moderates the influence of DER on stock returns
- H8 : Company size moderates the effect of inflation on stock returns

RESEARCH METHODS

This research is quantitative in nature, with the research object being property and real estate sector companies listed on the Indonesia Stock Exchange for the 2019–2023 period. The sampling technique used in this research was purposive sampling with a sample of 45 companies. The data that will be used in this research is secondary data. Secondary data is data obtained through intermediary media or indirectly. In this research, the data comes from financial reports of property and real estate companies listed on the Indonesia Stock Exchange (BEI) for the 2019–2023 period, which were obtained through the official website of the Indonesia Stock Exchange (BEI), namely <http://www.idx.co.id>. Apart from that, inflation data is obtained from the Bank Indonesia website, namely <http://www.bi.go.id>.

The data analysis technique in this research uses descriptive analysis. Testing was carried out by conducting panel data regression analysis with the help of Eviews 12.0 software. Testing begins by selecting the model with the Chow Test, Hausman Test, and Lagrange Multiplier Test. Hypothesis testing uses multiple linear regression analyses of panel data and coefficients of determination. The decision criteria is that if the p value is <0.05 , then H_0 is rejected and H_a is accepted, meaning that there is a significant influence of the independent variable on the dependent variable.

RESULTS

1. Paired Test of Two Models Without Moderation
 - a. Common Effect vs Fixed Effect

The chow-test is used to determine which model will be chosen in estimating and analysing the determinants of stock returns in the property and real estate sectors listed on the Indonesia Stock Exchange during the 2019–2023 period using a panel data regression model, whether a common

effect or fixed effect model. If the calculated F value (F-test) and chi-square test are smaller than $\alpha = 0.05$ (5%), then H0 is rejected and H1 is accepted.

Tabel 1. Chow Test Result

Effects Test	Statistic	d.f.	Prob.
Cross-section F	0.110663	(44,174)	1.0000
Cross-section Chi-square	6.182240	44	1.0000

Source: Data processing results, 2024

Based on the calculation results shown in Table 1, it can be concluded that from the chow-test, it can be seen that the probability value of the F test and chi-square test is greater than $\alpha = 0.05$ (5%), so that H0 is accepted and H1 is rejected, which means that the common effect model is better used in estimating the panel data regression method compared to the fixed effect model.

b. Common Effect vs Random Effect

Determining which model to use in panel data regression, whether the common effect model or the random effect model, is done through the Breusch-Pagan Lagrange multiplier (LM-test). If the LM test > chi-squares with Alpha = $\alpha = 0.05$, then H0 is rejected and H1 is accepted.

Table 2. Lagrange Multiplier Test Results

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	25.24818 (0.0000)	4706.561 (0.0000)	4731.809 (0.0000)

Source: Data processing results, 2024

Based on Table 2, the LM-test BP calculation is 25.24818, and the Breusch-Pagan LM-test probability value of 0.0000 is smaller than $\alpha = 0.05$. It can be concluded that the random effect model is better than the common effect model in estimating stock returns in the sector. property and real estate listed on the Indonesia Stock Exchange during the 2019–2023 period.

c. Fixed Effect vs Random Effect

After selecting which model to use—the fixed effect model or the random effect model—the Hausman test is carried out. If the Chi-Square Hausman test probability (prob) value is smaller than $\alpha = 0.05$ (5%), then H0 is rejected and H1 is accepted.

Table 3. Hausman Test Results

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	9.174687	5	0.1023

Source: Data processing results, 2024

Based on the results of the Hausman test calculation shown in Table 3, it is concluded that the Chi-Square probability value of 0.1023 is greater than $\alpha = 0.05$ (5%), so the panel data regression used in this research is a random effect model.

d. Model Conclusion

Based on the results of pairwise testing using the Chow test, the LM Breusch-Pagan (BP) test, and the Hausman test on the three panel data regression methods above and summarised in Table 4, it can be concluded that the fixed effect model was chosen to estimate stock returns in property and real estate sectors listed on the Indonesia Stock Exchange during the 2019–2023 period.

Table 4. Conclusion of Panel Data Regression Model Testing Without Moderation

No	Method	testing	Result
1	<i>Chow-Test</i>	<i>Common Effect vs Fixed Effect</i>	<i>Common Effect</i>
2	<i>Lagrange Multiplier-BP</i>	<i>Common Effect vs Random Effect</i>	<i>Random Effect</i>
3	<i>Hausman Test</i>	<i>Fixed Effect vs Random Effect</i>	<i>Random Effect</i>

Source: Data processing results, 2024

2. Paired Test of Two Models With Moderation

a) Common Effect vs Fixed Effect

The chow-test is used to determine which model will be chosen in estimating and analysing the determinants of stock returns in the property and real estate sectors listed on the Indonesia Stock Exchange during the 2019–2023 period using a panel data regression model, whether a common effect or fixed effect model. If the calculated F value (F-test) and chi-square test are smaller than $\alpha = 0.05$ (5%), then H0 is rejected and H1 is accepted.

Tabel 5. Chow Test Result

Effects Test	Statistic	d.f.	Prob.
Cross-section F	0.286476	(44,125)	0.99999
Cross-section Chi-square	17.197102	44	0.99990

Source: Data processing results, 2024

Based on the calculation results shown in Table 5, it can be concluded that from the chow-test, it can be seen that the probability value of the F test and chi-square test is greater than $\alpha = 0.05$ (5%), so H0 is accepted and H1 is rejected, which means that the common effect model is better used in estimating the panel data regression method compared to the fixed effect model.

b) Common Effect vs Random Effect

Determining which model to use in panel data regression, whether the common effect model or the random effect model, is done through the Breusch-Pagan Lagrange multiplier (LM-test).

Table 6. Lagrange Multiplier Test Results

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	14.2755 (0.0002)	1.8806 (0.1703)	16.1562 (0.0001)

Source: Data processing results, 2024

Based on Table 6, the LM-test BP calculation is 14.2755, and the Breusch-Pagan LM-test probability value of 0.0001 is smaller than $\alpha = 0.05$. It can be concluded that the random effect model is better than the common effect model in estimating stock returns in the property sector. and real estate listed on the Indonesian Stock Exchange during the 2019–2023 period.

c) Fixed Effect vs Random Effect

After selecting which model to use—the fixed effect model or the random effect model—the Hausman test is carried out. If the probability value (probability) of the of the Chi-Square Hausman test is smaller than $\alpha = 0.05$ (5%).

Table 7. Hausman Test Results

Effects Test	Statistic	d.f.	Prob.
Cross-section F	0.286476	(44,125)	0.99999
Cross-section Chi-square	17.197102	44	0.99990

Source: Data processing results, 2024

Based on the results of the Hausman test calculation shown in Table 7, it is concluded that the Chi-Square probability value of 0.9999 is greater than $\alpha = 0.05$ (5%), so the panel data regression used in this research is a random effect model.

d) Model Conclusion

Based on the results of pairwise testing using the Chow test, the LM Breusch-Pagan (BP) test, and the Hausmant test on the three panel data regression methods above and summarised in Table 8, it can be concluded that the random effect model was chosen to estimate stock returns in the property and real estate sectors. listed on the Indonesian Stock Exchange during the 2019–2023 period.

Table 8. Conclusion of Panel Data Regression Model Testing with Moderation

No	Metode	Pengujian	Hasil
1	<i>Chow-Test</i>	<i>Common Effect vs Fixed Effect</i>	<i>Common Effect</i>
2	<i>Lagrange Multiplier-BP</i>	<i>Common Effect vs Random Effect</i>	<i>Random Effect</i>
3	<i>Hausman Test</i>	<i>Fixed Effect vs Random Effect</i>	<i>Random Effect</i>

Source: Data processing results, 2024

Hypothesis test

Hypothesis testing is used to test the direct influence of independent variables on the dependent variable (Ghozali, 2016). The results of hypothesis testing in this research are presented in Table 9 below:

Table 9. Hypothesis Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.34495	0.82725	-2.8798	0.0060
ROA	-0.00689	0.06005	-0.1783	0.9011
NPM	0.00216	0.00355	0.0581	0.4606
DER	0.00234	0.00272	0.9051	0.3513
INFLASI	0.91237	0.07088	12.9450	0.0082
SIZE	-0.00779	0.02081	-0.2874	0.7753
X1Z	0.00285	0.00653	0.4087	0.6859

X2Z	-0.00044	0.00036	-0.7002	0.4482
X3Z	-0.00023	0.00021	-0.8487	0.4969
X4Z	0.00221	0.00602	0.4766	0.6591
R-squared	0.28084			
Adjusted R-squared	0.2003			
F-statistic	98.9749			
Prob(F-statistic)	9.9821			

Source: Data processing results, 2024

Based on the results of the hypothesis above, the following regression equation can be created:

$$Y = -2.34495 - 0.00689ROA + 0.00216NPM + 0.00234DER + 0.91237INFLASI - 0.00779SIZE + 0.00285ROA*SIZE - 0.00044NPM*SIZE - 0.00023IDER*SIZE + 0.00221INFLASI*SIZE$$

- 1) The first hypothesis (H1) proposed in this research states that ROA (X1) has no effect on stock returns (Y). Based on the results of data processing, it can be seen from the coefficient value, which is negative, and the probability value, which is 0.9011 (p-value < 0.05). So the hypothesis is rejected.
- 2) The second hypothesis (H2) proposed in this research states that NPM (X2) has no effect on stock returns (Y). Based on the results of data processing, it can be seen from the coefficient value, which is positive, and the probability value, which is 0.4606 (p-value < 0.05). So the hypothesis is rejected.
- 3) The third hypothesis (H3) proposed in this research states that DER (X3) has an effect on stock returns (Y). Based on the results of data processing, it can be seen from the coefficient value, which is positive, and the probability value, which is 0.3513 (p-value < 0.05). So the hypothesis is rejected.
- 4) The fourth hypothesis (H4) proposed in this research states that inflation (X4) has a significant effect on stock returns (Y). Based on the results of data processing, it can be seen from the coefficient value, which is positive, and the probability value, which is 0.0082 (p-value < 0.05). So the hypothesis is accepted.
- 5) The fifth hypothesis (H5) proposed in this research states that the interaction between ROA and size (X5) has a statistical value of 0.311 and a probability value of 0.6859 (p-value < 0.05). This means that the moderating variable size (Z) is unable to moderate between ROA and stock return (Y).
- 6) The sixth hypothesis (H6) proposed in this research states that the interaction between NPM and size (X6) has a statistical value of -0.756 and a probability value of 0.4482 (p-value < 0.05). This means that the moderating variable size (Z) is unable to moderate between NPM and stock return (Y).
- 7) The seventh hypothesis (H7) proposed in this research states that the interaction between DER and size (X7) has a statistical value of -0.223 and a probability value of 0.4969 (p-value < 0.05). This means that the moderating variable size (Z) is unable to moderate between DER and stock return (Y).
- 8) The eighth hypothesis (H8) proposed in this research states that the interaction between inflation and size (X8) has a statistical value of 0.173 and a probability value of 0.6591 (p-value < 0.05). This means that the moderating variable size (Z) is unable to moderate between inflation (Z) and stock returns (Y).

Furthermore, the adjusted R-square value in Table 9 above shows that the company's stock return (Y) variable is influenced by the ROA, NPM, DER, and inflation variables of 0.2003 (20.03%), and the remaining 79.97% is influenced by the variables others who were not included in the study.

DISCUSSION

The relationship between Return on Assets (ROA) and Stock Returns

The research results show that ROA has no positive or insignificant effect on stock returns. The results of this research are in line with research conducted by Hanna Chritianto Yap and Friska Firnanti (2020) and also by Patricia Rofalin, Mukhzarudfa, and Rico Wijaya Z (2022), which states that ROA does not have a significant influence on stock returns. However, there are several studies. Others who got different results, such as Saefrijal Arramdhani and Krido Eko Cahyono (2020), stated that ROA had a significant effect on stock returns.

The relationship between Net Profit Margin (NPM) and Stock Returns

The results of hypothesis testing in this research show that NPM does not have a significant effect on stock returns. This is in line with research by Mochammad Ridwan Ristyawan (2019), Munawir Adeputra, Indra Wijaya (2015), and Patricia Rofalin, Mukhzarudfa, and Rico Wijaya Z (2022). However, there are different results, as stated by Sri Haryani and Denies Priantinah (2018), stating that NPM has a significant positive influence on stock returns. This was also stated by Ferdinan Eka Putra (2016), who obtained the results that NPM had a significant effect on stock returns, either partially or simultaneously, along with other variables on stock returns.

The relationship between Debt to Equity Ratio (DER) and Stock Returns

In this research, the results show that DER has no significant effect on stock returns. The results of this research are in line with research conducted by Marice Br. Hutahuruk (2022) and Vincent Tan Dharma Putra (2020), who also stated that DER has no effect on stock returns. Contradictory results were found in the research of Saefrijal Arramdhani and Krido Eko Cahyono (2020), which stated that DER has a significant effect on stock returns. Likewise, DER results influence stock returns obtained by Patricia Rofalin, Mukhzarudfa, and Rico Wijaya Z (2022).

The Relationship between Inflation and Stock Returns

Hypothesis test results show that inflation has a significant effect on stock returns. The results of this research are in line with the research of Made Ayu Desy Geriadi and Gusti Bagus Wiksuana (2017) and Rolia Wahasusmiah, Endang Puji Lestari, Poppy Indriani, and Septiani Fransisca (2022), who stated that the inflation variable has a significant effect on stock returns. However, the research results of Munawir Adeputra and Indra Wijaya (2015) and Septa Lukman Andes, Zarah Puspitaningtyas, and Aryo Prakoso (2017) state the opposite, namely that the inflation variable has no influence on stock returns.

Relationship between company size as a moderator between ROA and stock returns

Company size can be seen from total assets, sales, and market capitalisation, all of which influence investors' perceptions of the company. Large companies tend to be more likely to go public, are known by many people, and have the potential to increase company value. Research by Mahatma Dewi and Wirajaya (2013) shows that large companies usually have large market capitalisation, high book value, and large profits. However, in this study, the results showed that company size was not able to moderate the relationship between ROA and stock returns. This result is different from the results of research conducted by Suyanto and Umi Amilatul Risqi (2022), which stated that company size was able to significantly moderate ROA and stock returns.

Relationship between company size as a moderator between NPM and stock returns

Joel G. Siegel and Jae K. Shim in Kasmir (2013) define the net profit margin (NPM), or net profit margin, as the ratio between net profit and net sales. This shows the stability of net profit in generating income at a certain sales level. Net profit margin is also known as the ratio of revenue to sales (Fahmi, 2017). This research shows that company size has not moderated the relationship between NPM and stock returns. This result is also in line with research by Rofalina et al. (2022), which also found that company size does not have a significant influence on moderating the relationship between NPM and stock returns.

Relationship between company size as a moderator between DER and stock returns

The debt-to ratio (DER) is a ratio that is expected to influence stock returns because the higher the DER, the higher the company's risk. Usually, investors tend to avoid stocks with high DER values. DER is a solvency ratio that shows a company's ability to fulfil all its obligations, indicated by how much of its own capital is used to pay debts (Sari, 2012). Hypothesis test results show that company size is unable to moderate the relationship between DER and stock returns. This is different from research conducted by Purwitajati and Putra (2016), which stated that company size weakens the influence of DER on stock returns.

Relationship between company size as a moderator between inflation and stock returns

Unstable economic conditions can occur at any time, so investors must be prepared to face various investment risks. One factor that influences economic conditions and investment is inflation. According to Setyaningrum and Muljono (2016), inflation is a situation where prices generally continue to increase or the value of money continues to decrease because the amount of money in circulation increases without being balanced by an increase in the supply of goods. High inflation will cause stock prices in the market to fall, while very low inflation will make economic growth very slow, which in turn also makes stock price movements slow (Samsul, 2006). In this research, company size was also unable to moderate the relationship between inflation and stock returns.

CONCLUSION

Based on the research results, it can be concluded that return on assets (ROA) does not have a significant influence on the stock returns of property and real estate companies listed on the Indonesia Stock Exchange (BEI) during the 2019–2023 period. This shows that the efficient use of company assets is not always reflected in an increase in share prices. Then the net profit margin (NPM) also does not show a significant influence on stock returns. This indicates that the company's net profit margin does not directly influence investors' decisions regarding purchasing shares. Furthermore, the debt-to-equity ratio (DER) does not have a significant influence on stock returns. The debt-to-equity ratio was not a determining factor in stock price fluctuations for the property and real estate sectors during the research period. And inflation has a significant positive influence on stock returns. This indicates that a high level of inflation can affect investors' perceptions of the profit potential of shares in this sector. Lastly, company size is not able to moderate the influence of the research variables (ROA, NPM, DER, and inflation) on stock returns. This means that the size of the company does not strengthen or weaken the relationship between financial and economic factors and stock returns.

REFERENCES

- [1] Brigham, E. F., & Houston, J. F. (2009). *Dasar-dasar Manajemen Keuangan* (11th ed.). Jakarta: Salemba Empat.
- [2] Dewi, A. S. M., & Wirajaya, A. (2013). Pengaruh struktur modal, profitabilitas, dan ukuran perusahaan pada nilai perusahaan. *E-Jurnal Akuntansi Universitas Udayana*, 4(2), 358-372.
- [3] Fahmi, I. (2012). *Analisis kinerja keuangan*. Bandung: Alfabeta.
- [4] Fahmi, I. (2017). *Pengantar manajemen keuangan*. Bandung: Alfabeta.
- [5] Fama, E. F., & French, K. R. (1993). Common risk factors in the returns on stocks and bonds. *Journal of Financial Economics*, 33(1), 3-56.
- [6] Ghozali, I. (2016). *Aplikasi analisis multivariate dengan program IBM SPSS 23* (8th ed.). Semarang: Badan Penerbit Universitas Diponegoro.
- [7] Kasmir. (2012). *Analisis laporan keuangan*. Jakarta: Rajawali Pers.
- [8] Kasmir. (2013). *Manajemen perbankan*. Jakarta: Rajawali Pers.
- [9] Kasmir. (2014). *Analisis laporan keuangan*. Jakarta: Rajawali Pers.
- [10] Kasmir. (2015). *Pengantar manajemen keuangan*. Jakarta: Rajawali Pers.
- [11] Mishkin, F. S. (2008). *Ekonomi uang, perbankan, dan pasar keuangan*. Jakarta: Salemba Empat.
- [12] Purwitajati, E., & Putra, I. M. P. D. (2016). Pengaruh debt to equity ratio pada return saham dengan ukuran perusahaan sebagai pemoderasi. *E-Jurnal Akuntansi Universitas Udayana*, 15(2), 1086-1114.
- [13] Rofalina, F., Mukhzarudfa, & Wijaya Z., R. (2022). The effect of financial ratios and firm size on stock returns: A case study on property and real estate companies. *Jurnal Manajemen dan Akuntansi*, 20(2), 123-134

-
- [14] Samsul, M. (2006). Pasar modal dan manajemen portofolio. Jakarta: Erlangga.
- [15] Sari, M. (2012). Manajemen keuangan perusahaan. Yogyakarta: Gadjah Mada University Press.
- [16] Setyaningrum, D., & Muljono, P. (2016). Analisis dampak inflasi dan suku bunga terhadap harga saham. *Jurnal Manajemen dan Organisasi*, 5(2), 103-112.
- [17] Siegel, J. G., & Shim, J. K. (2005). *Accounting handbook* (3rd ed.). New York: Barron's
- [18] Suyanto, & Risqi, U. A. (2022). Pengaruh return on asset dan return on equity terhadap nilai perusahaan dengan ukuran perusahaan sebagai variabel moderasi. *Al-Kharaj: Jurnal Ekonomi, Keuangan & Bisnis Syariah*, 4(4), 1122-113
- [19] Tandelilin, E. (2010). *Portofolio dan investasi: Teori dan aplikasi*. Yogyakarta: Kanisius.
- [20] Wimelda, L., & Marlinah. (2013). Analisis rasio keuangan terhadap pertumbuhan laba pada perusahaan dagang yang terdaftar di Bursa Efek Indonesia. *Jurnal Akuntansi dan Auditing*, 10(1), 13-27.