

The Influence Factors on Stock Returns of Real Estate and Property Companies Listed in Bei in 2010 - 2014

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KEYWORDS

Stock Return; DER, EPS, NPM, PBV; Inflation, Exchange Rate, SBI, and GDP

ABSTRACT

This research seeks to examine and offer insights into the factors that impact stock returns of real estate and property companies listed on the Indonesia Stock Exchange. The examined factors include DER, EPS, NPM, PBV, inflation, exchange rate, SBI, and GDP. The research focuses on real estate and property companies listed on the Indonesia Stock Exchange during the 2010-2014 period, involving a total of 38 companies. The study analyzes the impact of these variables DER, EPS, NPM, PBV, inflation, exchange rate, SBI, and GDP on the stock returns of these companies. Data were collected from sources such as Bank Indonesia, the Central Bureau of Statistics, and the Indonesia Stock Exchange. The findings reveal that DER, EPS, NPM, and PBV significantly influence stock returns, whereas inflation, exchange rate, SBI, and GDP do not have a significant impact on the stock returns of real estate and property companies.

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Introduction

The capital market plays a vital role in a country's economy, serving as a key indicator of economic growth. Economic progress is often reflected in increased trading volume within the capital market, making the state of the capital market a mirror of the nation's economic health (Benny, 2009). One of its primary functions is to facilitate the mobilization of funds from the public, channeling them into various investment sectors. For individuals with surplus funds, the capital market offers an alternative avenue for investment, providing opportunities to grow their wealth while supporting economic development (Aditya & Wirawati, 2013).

The primary motivation for investing is to generate profit. In the context of investment management, this profit is commonly referred to as a return (Sawir, 2009). It is entirely natural for investors to expect a specific level of return on the funds they have allocated to investments (Doughlas et al., 2012).

The real estate and property sector is one of the key sectors in Indonesia that draws the attention of investors, as it plays a crucial role in the country's economy. This sector is seen as an important indicator of a nation's economic health.

According to processed data from the IDX, it is evident that the return on the real estate and property sector has experienced growth from 2010 to 2014, as follows:

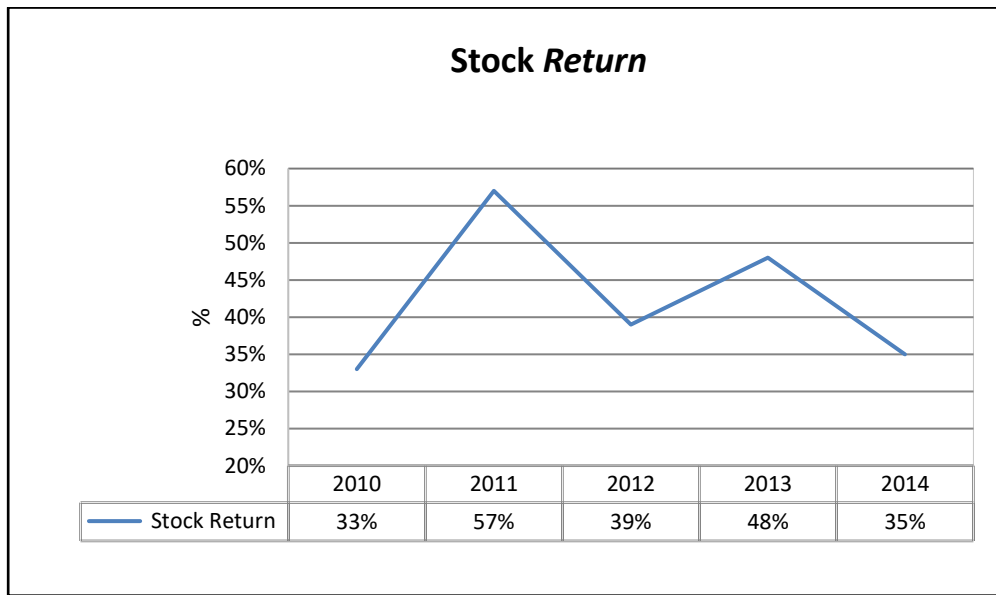


Figure 1.
Real Estate and Property Stock Return 2010 - 2014

Source : IDX Statistics 2010-2014 / www.idx.co.id (processed)

The graph above illustrates real estate and property stock returns measured using capital gains for real estate and property from 2010-2014. It can be seen that stock returns in 2014 decreased to 35% from 48% in 2013. Stock returns are influenced by microeconomic factors and macroeconomic indicators, in this study the microeconomic variables used are Debt to Equity Ratio (DER), Earning Per Share (EPS), Net Profit Margin (NPM), and Price to Book Value (PBV), while the macroeconomic indicator variables are Economic Growth (GDP), Inflation, Interest Rates (SBI), and Exchange Rates.

To analyze stock returns, investors not only consider company performance factors but also need to analyze factors outside the company (Bastian et al., 2009). Prastowo states that external factors that can directly impact a company's performance include interest rates, exchange rates, international economic conditions, a country's economic cycle, inflation rates, tax policies, and the money supply.

According to Samsul, (2009) stock returns are influenced by both macro and micro factors. Macro factors refer to external elements that are beyond the company's control, while micro factors involve internal aspects within the company, such as net income, book value per share, debt-to-equity ratio, and other financial ratios.

Real estate and property companies were chosen for this study because of the significant increase in their stock returns during the research period. The study aims to analyze how various factors, such as DER, NPM, PBV, EPS, inflation, exchange rates, SBI interest rates, and GDP growth, influence the stock returns of companies in the real estate and property sector listed on the Indonesia Stock Exchange between 2010 and 2014.

Stock returns are influenced by both microeconomic and macroeconomic factors. Microeconomic factors include financial ratios such as the Debt to Equity Ratio (DER), Earnings Per

Share (EPS), Net Profit Margin (NPM), and Price to Book Value (PBV), which provide insights into a company's performance and financial health. Macroeconomic factors, as defined by Prastowo and Samsul, include variables like inflation, interest rates, exchange rates, and gross domestic product (GDP). These external factors impact investor decisions and market trends by shaping the broader economic environment.

Previous studies have explored the impact of these variables on stock performance. For instance, research by Javed and Akhtar (2012) highlighted the significant role of macroeconomic factors in influencing stock returns in emerging markets. Similarly, Anastasia et al., (2009) examined fundamental and systematic risk factors affecting property sector stocks, revealing the interplay of internal financial metrics and external economic conditions.

Despite the existing literature, there remains a lack of comprehensive studies integrating both microeconomic and macroeconomic determinants in the context of the Indonesian real estate and property sector. This industry, being a vital economic indicator, requires an in-depth analysis of these factors to understand their collective impact on stock returns during various economic cycles (Iskandar, 2009).

Given the fluctuations in real estate and property stock returns observed between 2010 and 2014, particularly the significant decline in 2014, there is an urgent need to investigate the underlying causes. Understanding these dynamics can provide valuable insights for investors, policymakers, and stakeholders to make informed decisions and strategies (Desy & Astohar, 2012).

This study aims to examine the impact of DER, EPS, NPM, PBV, inflation, exchange rates, SBI interest rates, and GDP growth on the stock returns of real estate and property companies listed on the Indonesia Stock Exchange from 2010 to 2014. By addressing the identified research gap, the study seeks to enhance both the theoretical and practical understanding of the factors influencing stock performance in emerging markets.

Research Methods

This study employs an explanatory research design to analyze the relationships between variables and examine how one variable influences another. The independent variables include DER, EPS, NPM, PBV, inflation, exchange rate, interest rate (SBI), and GDP growth, while the dependent variable is stock return.

The analysis method used is multiple linear regression, with hypothesis testing conducted through t-tests and independent sample t-tests (two mean difference tests). Prior to the analysis, classical assumption tests are performed, including normality, multicollinearity, and heteroscedasticity tests, as the study involves panel data (Sugiyono, 2009).

The regression equation is:

$$Y_{\text{Indonesia}} = a + b_1 \text{ DER} + b_2 \text{ EPS} + b_3 \text{ NPM} + b_4 \text{ PBV} + b_5 \text{ INF} + b_6 \text{ KURS} + b_7 \text{ SBI} + b_8 \text{ GDP} + \varepsilon$$

T-test

The t-test, also known as the test statistic, is used to perform a hypothesis test on the regression coefficient individually. It helps assess the significance of the regression coefficient. According to

Gujarati, significance testing is a process where sample results are used to assess the validity of the null hypothesis. The decision to accept or reject the null hypothesis is based on the value of the test statistic. When testing the regression coefficient, there are two possible outcomes: if the population regression coefficient equals zero, it suggests that the independent variable has no effect on the dependent variable; if it is not equal to zero, it indicates that the independent variable does have an influence on the dependent variable (Thobarry & Achmad, 2009).

Results and Discussion

Regression Test Results

This test is performed by regressing all independent variables DER, EPS, NPM, PBV, inflation, exchange rate, SBI, and GDP on the dependent variable, which is stock returns. In determining the appropriate panel data regression model, it was concluded that the Pooled Least Squares (PLS) model is the most suitable for this study. A good regression model is indicated by R^2 and Adjusted R^2 values that are close to one. Based on the regression results, the R^2 value for the pooled least square model is 0.302099, while the Adjusted R^2 for the pooled least square model is 0.271253.

The F-Stat test results of the pooled least square model show that the probability F-Stat is very small and below the alpha value of 0.05 so that the pooled least square model has a regression coefficient that is able to explain the dependent variable together. The regression test results can be seen in table 1:

Table 1. Real Estate and Property Panel Data Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.207242	4.235870	-0.285004	0.7760
DER	-0.314975	0.129327	-2.435496	0.0158
EPS	0.002361	0.000393	6.014880	0.0000
NPM	0.270480	0.111205	2.432269	0.0160
PBV	0.233760	0.062449	3.743202	0.0002
INFLATION	-0.278630	0.245756	-1.133766	0.2584
COURSE	-1.49E-05	0.000180	-0.082718	0.9342
SBI	47.36756	43.93705	1.078078	0.2824
GDP	0.049120	0.503687	0.097521	0.9224
R-squared	0.302099	Mean dependent var		0.442269
Adjusted R-squared	0.271253	S.D. dependent var		1.088443
S.E. of regression	0.929168	Akaike info criterion		2.737154
Sum squared resid	156.2668	Schwarz criterion		2.890961
Log likelihood	-251.0297	Hannan-Quinn criter.		2.799459
F-statistic	9.793652	Durbin-Watson stat		2.103842
Prob(F-statistic)	0.000000			

Source: Eviews 8 output

Based on Table 1 above, the regression equation results are as follows:

$$\text{Stock Return} = -1.2072 - 0.3149\text{DER} + 0.0023\text{EPS} + 0.2704\text{NPM} + 0.2337\text{PBV}$$

Hypothesis Testing

H1: DER has a negative effect on stock returns

H2: EPS has a positive effect on stock returns

H3: NPM has a positive effect on stock returns

H4: PBV has a positive effect on stock returns

H5: Inflation has a negative effect on stock returns

H6: Exchange rate has a positive effect on stock returns

H7: SBI has a positive effect on stock returns

H8: GDP has a positive effect on stock returns

Regression Test Results

This study investigates the impact of DER, EPS, NPM, PBV, inflation, exchange rate, SBI, and GDP on stock returns in the real estate and property sector by employing panel data regression analysis. The findings reveal varying levels of significance for these variables, as summarized below:

1. Debt to Equity Ratio (DER):

The regression results show that DER has a negative effect on stock returns (coefficient = -0.3149, p-value = 0.0158). This finding aligns with the financial theory that higher leverage increases financial risk, deterring investors and negatively impacting stock performance. Previous research by Lulukiyah, (2010) similarly highlights the adverse effects of high DER on stock returns in Indonesian markets.

2. Earning Per Share (EPS):

EPS has a positive and significant effect on stock returns (coefficient = 0.0023, p-value = 0.0000), corroborating the signaling theory, which suggests that higher earnings per share signal better company performance and attract investors. These results are consistent with studies by Aristas & Astobar, (2012), which confirm the positive impact of EPS on stock returns in emerging markets.

3. Net Profit Margin (NPM):

NPM positively influences stock returns (coefficient = 0.2704, p-value = 0.0160). This is in line with profitability theory, where higher profit margins indicate better operational efficiency, enhancing investor confidence. The findings align with similar studies by Dubravka, (2010), who identified profitability ratios as key determinants of stock performance.

4. Price to Book Value (PBV):

PBV also exhibits a positive and significant relationship with stock returns (coefficient = 0.2337, p-value = 0.0002). This supports the valuation theory, which posits that companies with higher PBV ratios are perceived as having strong growth potential, thus attracting investment. The results echo those of Mulia et al., (2012), who emphasize PBV's role in stock valuation.

Insignificant Variables and Their Implications

1. Inflation:

Inflation does not significantly affect stock returns (p-value = 0.2584). This contrasts with the findings of Kurniadi, (2013), who observed inflation's impact on other sectors. A possible explanation is that real estate and property stocks may already price in inflation risks due to their sensitivity to long-term investment trends.

2. Exchange Rate:

The exchange rate's impact on stock returns is insignificant (p-value = 0.9342), diverging from studies like (Javed et al., 2012), which reported exchange rates as critical to stock market performance. This could be due to the sector's reliance on domestic demand, reducing exposure to exchange rate fluctuations.

3. SBI Interest Rates and GDP:

Neither SBI interest rates (p-value = 0.2824) nor GDP (p-value = 0.9224) significantly influence stock returns. While these findings diverge from economic growth theories that often emphasize the macroeconomic environment's impact, they suggest that microeconomic factors dominate investor decision-making in this sector. Similar patterns were noted in the study by Thobarry, (2009) which found mixed macroeconomic impacts on stock returns.

This study confirms the dual influence of microeconomic and macroeconomic factors on stock performance. While microeconomic indicators such as DER, EPS, NPM, and PBV significantly affect stock returns, macroeconomic variables like inflation, exchange rate, interest rates, and GDP show limited influence in this sector. This divergence highlights the need for sector-specific analyses to fully understand stock return dynamics.

The findings underscore the importance of corporate financial health in determining stock returns, as reflected in DER, EPS, NPM, and PBV. Investors and stakeholders in the real estate and property sector should prioritize these metrics when evaluating investment opportunities. Additionally, the muted impact of macroeconomic variables suggests that sector-specific resilience mechanisms may buffer against broader economic fluctuations.

Conclusion

The conclusions drawn from this study are as follows: The Debt-to-Equity Ratio (DER) negatively impacts the stock returns of real estate and property companies listed on the Indonesia Stock Exchange for the period 2010-2014. Earnings per Share (EPS) positively affects stock returns in the real estate and property sector during the same period. Net Profit Margin (NPM) also has a positive effect on stock returns in this sector from 2010 to 2014. Price-to-Book Value (PBV) positively influences stock returns in real estate and property companies listed on the Indonesia Stock Exchange for the 2010-2014 period. Inflation, exchange rates, SBI, and GDP, however, do not have any significant effect on the stock returns of real estate and property companies listed on the Indonesia Stock Exchange during the same period.

These results provide evidence that investors should prioritize microeconomic indicators when evaluating stock investments in the real estate and property sector. The findings underscore the importance of firm-specific financial metrics such as DER, EPS, NPM, and PBV, which play a more

significant role than macroeconomic factors in influencing stock returns. Furthermore, this study contributes to a deeper understanding of the unique dynamics within the real estate and property sector, which may differ substantially from those in other industries, emphasizing the need for sector-specific investment strategies.

For future researchers, several suggestions are proposed to build on this study. First, extending the analysis period beyond 2010–2014 could provide insights into whether the observed patterns hold across different economic cycles. Second, incorporating additional variables such as corporate governance, market sentiment, and regional economic indicators may offer a more comprehensive view of stock return determinants. Third, conducting comparative sector analyses could help identify industry-specific dynamics and provide broader market insights. Fourth, given the limited impact of macroeconomic variables found in this study, future research could explore why these factors appear to have muted effects in the real estate and property sector compared to others. Lastly, employing advanced econometric techniques, such as structural equation modeling or machine learning methods, could enhance the robustness and predictive accuracy of future studies, offering deeper and more nuanced insights into stock performance determinants.

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