

The Impact of Price and Market Value Added Earnings Ratio for Stock Returns in Companies in Subsectors Civil engineering and heavy construction listed between 2020 and 2024 on the Indonesia Stock Exchange

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ABSTRACT

This study aims to test and assess the partial and simultaneous effects of Market Value Added (MVA) and Price Earning Ratio (PER) on stock returns in sub-sector companies Heavy Construction & Civil Engineering listed on the Indonesia Stock Exchange for the 2020–2024 period. The study employed a quantitative methodology using secondary data from stock prices and financial reports. Purposive sampling was used to determine the sample, yielding a total of 35 observations from 7 companies. Descriptive statistics, classical assumption tests, panel data regression, correlation analysis, coefficient of determination, partial tests (t-test), and simultaneous tests (F-test) were among the data analysis techniques used. The results showed that, to some extent, MVA had a favorable and significant impact on stock returns. The findings indicated that while PER had no significant effect with a probability value of 0.8770, MVA had a partial positive and significant effect on stock returns with a probability value of 0.0000. At the same time, both MVA and PER had a significant effect on stock returns with a mark probability F of 0.000000 (<0.05). The equation regression obtained is $Y = -1.036407 + 7.51E-13X_1 + 0.000283X_2 + e$. Coefficient value correlation of 0.9651 shows very strong relationship between variables independent and dependent. Coefficient determination (R^2) of 0.927213 shows that 92.72% of the variation in Stock Returns can be explained by MVA and PER, while 7.28% is influenced by other external factors study.

INTRODUCTION

One industry that makes a substantial contribution to Indonesia's GDP is the building sector. This industry consistently ranks among the biggest contributors to the national economy, according to data from Statistics Indonesia (BPS). The construction industry contributed 10.43% of the country's GDP in the fourth quarter of 2024. This accomplishment demonstrates the construction industry's strategic contribution to Indonesia's economic development. (Central Statistics Agency, 2024)

Stock returns of companies in the Heavy Construction & Civil Engineering subsector listed on the Indonesia Stock Exchange experienced considerable fluctuations during the 2020–2024 period. The research results show that the highest stock return was 1,698%, while the lowest reached -70%. This substantial variation indicates that investment returns differed significantly across companies and observation periods. Such fluctuations reflect the uncertainty of companies in generating returns for investors and therefore represent an important factor to consider when making investment decisions.

This condition is closely related to the characteristics of companies in the Heavy Construction & Civil Engineering subsector, which typically undertake large-scale projects, require substantial capital, and operate with relatively long project durations. Company performance may also be affected by the acquisition of new contracts, timely project completion, fluctuations in raw material prices, economic conditions, and government policies concerning infrastructure development. These factors can shape investors' perceptions of a company's future prospects, thereby influencing stock prices and ultimately causing variations in stock returns.

Based on the type of construction (Construction, 2025) , it appears that building construction and civil engineering contribute the largest share to total FDI investment in the construction sector . Meanwhile, specialized construction still accounts for a lower share of investment, although it has begun to show an upward trend in recent years. Changes in investment proportions between these subsectors indicate a dynamic direction of investment that adapts to national development needs and the increasing activity of infrastructure projects in various regions of Indonesia.

Companies in the heavy construction and civil engineering subsector that are listed as public entities on the Indonesia Stock Exchange (IDX) are often the choice of capital market investors. Investors typically use fundamental analysis when making investment decisions in order to evaluate the state and performance of the firm and estimate the prospective return. The rate of return that investors earn on their investments in a company is represented by stock returns. Stock returns are an indicator that investors use to evaluate the profitability of their investments because they can be earned as dividends or capital gains. The higher the stock return, the higher the investors' profit. On the other hand, poor or even negative stock returns suggest that the investment has not yet produced the desired outcomes for investors. (Kusdiana & Safrizal, 2021)

This study attempts to reexamine the relationships between Market Value Added (MVA) and Price-Earnings Ratio (PER) on stock returns in light of

the phenomenon seen in the construction industry and the conflicting results of earlier research. The study "The Impact of Price and Market Value Added Earnings Ratio for Stock Returns in Companies in Subsectors Civil engineering and heavy construction listed between 2020 and 2024 on the Indonesia Stock Exchange " is therefore of interest to the author.

LITERATURE REVIEW

Market Value Added

Market Value Added (MVA) is a term used in financial management to describe the extra value that a business generates for its owners. The difference between the capital invested by shareholders and the company's current market value is used to calculate MVA. MVA Calculation According to own et al (2010) in (Destriyanti & Isynuwardhana, 2020),state that the following formula can be used to determine MVA:

$$\text{Market Value Added} = \text{Firm Value} - \text{Invested Capital}$$

Price Earning Ratio

The Price Earnings Ratio (PER) is a ratio that compares the market price per share to the profit earned per share in order to evaluate the value of a stock, according to Nida An-Nur Kholifah (2020) A company's PER raises investors' perceptions of its potential for future profit growth.

$$\text{Price Earning Ratio} = \frac{\text{stock price}}{\text{Earning Per Sahre}}$$

Stock Return

According to Tandelilin (2017) states that stock return metrics and evaluations are typically given in percentages rather than in monetary units like the rupiah. Because it may more accurately depict the level of investment returns, percentage presentation is thought to be more effective. In this manner, the quantity of money spent has no bearing on return estimates, which makes it simpler to compare outcomes across investments and time periods. This method enables investors to assess investment performance more precisely and have a better understanding of the amount of return produced by a stock.

$$\text{Stock Return} = R_t = \frac{(P_t - P_{t-1})}{P_{t-1}} + \text{dividend}$$

METODOLOGY

Panel data based on data types is used in this study. Claims that this type of information is pre-existing and that researchers obtain it indirectly from the subject of the study. Websites or other sources pertaining to the research topic, including the official Indonesia Stock Exchange website, www.idx.co.id.

RESEARCH RESULTS

Table 1. Model Selections Test

Testing	Statistical Value	Probability	Decision
Uji Chow (Cross-section F)	31.151832	0.0000	Fixed Effect Model
Uji Hausman (Chi-Sq.)	0.948398	0.6624	Random Effect Model
Uji Lagrange Multiplier (Breusch-Pagan)	0.0001	0.0001	Random Effect Model

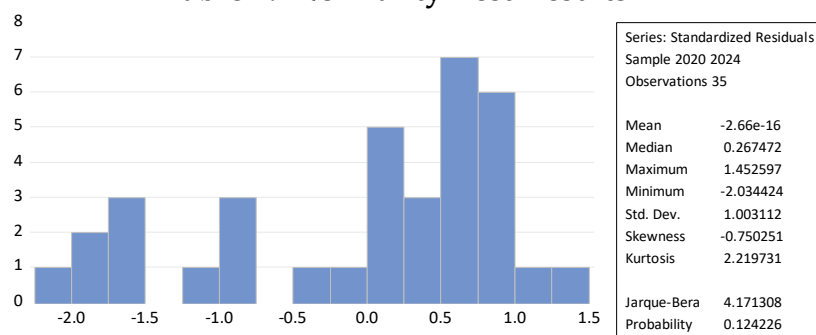
The Random Effect Model (REM) is determined to be the best estimating strategy for this investigation based on the outcomes of the Chow, Hausman, and Lagrange Multiplier (LM) tests. The Fixed Effect Model (FEM) is better suitable than the Common Effect Model (CEM), according to the Chow Test, which yields a probability value of $0.0000 < 0.05$. But according to the Hausman Test, the Random Effect Model is more suitable than the Fixed Effect Model, with a probability value of $0.6624 > 0.05$. Additionally, the Lagrange Multiplier (LM) Test confirms that the Random Effect Model is better than the Common Effect Model with a probability value of $0.0001 < 0.05$. Consequently, following an assessment of the outcomes of the three model selection processes, the Random Effect Model (REM) is Thus, the Random Effect Model (REM) is ultimately chosen as the best model for estimating the panel data regression in this study after assessing the outcomes of the three model selection processes.

Classical Assumption Test

The classical assumption test is conducted to assess and ensure that the regression model applied in this study meets the required criteria. This testing process includes several essential aspects, such as:

Normality Test

Table 2. Normality Test Results



Source: Eviews 13, 2026 data processing results.

The Jarque-Bera (JB) statistic is 4.171308 with a probability value of 0.124226 based on the normality test findings shown in table 2. The null hypothesis, which states that the residuals are normally distributed, cannot be rejected because the probability value is greater than the significance level of 0.05. This outcome shows that there are no significant departures from the normality assumption because the residual data in the regression model follow a normal

distribution. Consequently, it can be said that the data can be further examined using the suggested regression model since the normalcy assumption needed for the regression analysis has been sufficiently met.

Multicollinearity Test

Table 3. Multicollinearity Test Results

	X1	X2
X1	1.000000	-0.081413
X2	-0.081413	1.000000

The correlation coefficient between X1 and X2 is -0.081413 based on the multicollinearity test results, which is still far below the predetermined threshold of 0.80. This result suggests that there is not much of a correlation between the independent variables. As a result, X1 and X2 can be included in the regression analysis at the same time because the regression model is free from multicollinearity problems.

Heteroscedasticity Test

Table 4. Heteroscedasticity Test Results

Dependent Variable: ABS_RES

Method: Panel Least Squares

Date: 06/23/26 Time: 13:44

Sample: 2020 2024

Periods included: 5

Cross-sections included: 7

Total panel (balanced) observations: 35

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.786834	0.102445	7.680525	0.0000
X1_MVA	3.56E-14	2.39E-14	1.490924	0.1458
X2_PER	-0.000940	0.001189	-0.790668	0.4350

The probability values for X1 and X2 are 0.1458 and 0.4350 based on the heteroskedasticity test utilizing the Panel EGLS method. The regression model does not experience heteroskedasticity problems because both values are more than 0.05.

Panel Data Regression Analysis

Table 5. Panel Data Regression Test Results

Dependent Variable: Y_RETURN_SAHAM				
Method: Panel EGLS (Cross-section random effects)				
Date: 06/23/26 Time: 13:22				
Sample: 2020 2024				
Periods included: 5				
Cross-sections included: 7				
Total panel (balanced) observations: 35				
Swamy and Arora estimator of component variances				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.036407	0.353729	-2.929950	0.0062
X1_MVA	7.51E-13	3.66E-14	20.51356	0.0000

X2_PER	0.000283	0.001814	0.155963	0.8770

The panel data regression model equation is obtained as follows from the table's data:

$$\text{Return Saham} = -1.036407 + 7.51\text{E-}13 \cdot \text{MVA} - \text{PER} + e$$

1. The constant value of -1.036407 means that a one-year rise will lower Stock Return by -1.036407 if the independent variables, Market Value Added (MVA) and Price-Earnings Ratio (PER), are kept constant or set to zero.
2. The regression coefficient for Market Value Added (MVA) is 7.51-13. This suggests that, provided all other factors stay the same, stock return rises by 7.51E-13 units for every unit increase in MVA, and vice versa.
3. The Price-Earnings Ratio (PER) coefficient is 0.000283 a rise in PER is correlated with a fall in stock return, and vice versa. This suggests that, assuming all independent variables stay the same or are equal to zero, the stock return falls by 0.000283 for every unit increase in the PER.

Hypothesis Testing Simultaneous Test (F)

Table 7. Simultaneous F-Test Results

	Weighted Statistics		
R-squared	0.931495	Mean dependent var	0.158385
Adjusted R-squared	0.927213	S.D. dependent var	2.651206
S.E. of regression	0.715271	Sum squared resid	16.37160
F-statistic	217.5581	Durbin-Watson stat	0.895130
Prob(F-statistic)	0.000000		

CONCLUSION AND SUGGESTIONS

The findings of this study demonstrate that Market Value Added (MVA) has a positive and statistically significant influence on stock returns among companies operating in the Heavy Construction & Civil Engineering subsector. This result indicates that an increase in MVA tends to be associated with an improvement in the stock returns received by investors. In contrast, the Price-Earnings Ratio (PER) does not have a statistically significant effect on stock returns, suggesting that changes in PER alone are not sufficient to explain variations in stock returns within the observed companies. Nevertheless, the simultaneous significance test reveals a F-statistic probability value of 0.000000, which is considerably lower than the 0.05 significance level. This finding confirms that MVA and PER, when considered jointly, have a statistically significant effect on stock returns. Therefore, although MVA independently contributes significantly to changes in stock returns while PER does not demonstrate an individual significant effect, both independent variables collectively play a significant role in explaining variations in stock returns.

Suggestion

1. For Companies

It is anticipated that this study will help corporate management gain a better grasp of the variables affecting the Price-Earnings Ratio (PER) and Market Value Added (MVA), as well as how they affect stock returns. As a result, the business can create future stock-related policies and provide shareholders or investors with additional value. Additionally, by providing investors with information about MVA, PER, and their impact on stock returns within the companies under study, this research hopes to help investors make more sensible and profitable investment decisions.

2. For Investors

This research is expected to provide information to investors regarding *Market Value Added and Price Earning Ratio* . and its impact on the stock returns of the companies studied. This information is expected to inform investors' decisions more carefully and optimally, thereby increasing the opportunity to maximize profits.

3. For Research Furthermore

Investors are anticipated to receive information from this study about Price-Earnings Ratio and Market Value Added, as well as how these factors affect the stock returns of the firms being examined. The goal of this information is to help investors make better, more sensible decisions, which will raise the possibility of maximizing earnings.

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