

## ANALYSIS OF THE EFFECT OF FINANCIAL PERFORMANCE AND MARKET PERFORMANCE ON FIRM VALUE WITH MARKET VALUE ADDED AS A MEDIATION VARIABLE

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### ABSTRACT

*The purpose of this study is to determine the effect of financial performance calculated by Return on Assets and market performance calculated by Price Earnings Ratio on firm value through Market Value Added as an intervening variable in mining companies listed on the Indonesia Stock Exchange in 2018-2020. The population used is 77 mining companies, purposive sampling method is used as a sampling technique which is then obtained by 25 mining companies with 75 data. Hypothesis testing uses a simultaneous test, partial test, and Sobel test. The research findings show that the relationship between financial performance and firm value is supported, but the relationship between market performance and firm value; is not supported. Furthermore, Market Value Added can mediate the effect of financial performance on firm value, but Market Value Added is not able to mediate the effect of market performance on firm value.*

*Keywords: financial performance, market performance, market value added, firm value.*

### ABSTRAK

Tujuan dari penelitian ini adalah untuk mengetahui pengaruh kinerja keuangan yang dihitung dengan Return on Assets dan kinerja pasar yang dihitung dengan Price Earnings Ratio terhadap nilai perusahaan melalui Market Value Added sebagai variabel *intervening* pada perusahaan pertambangan yang terdaftar di Bursa Efek Indonesia tahun 2018-2020. Populasi yang digunakan adalah 77 perusahaan pertambangan, digunakan metode purposive sampling sebagai teknik pengambilan sampel yang kemudian diperoleh 25 perusahaan pertambangan dengan 75 data. Pengujian hipotesis menggunakan uji simultan, uji parsial, dan uji Sobel. Hasil penelitian menunjukkan bahwa hubungan antara kinerja keuangan dan nilai perusahaan; didukung, tetapi hubungan antara kinerja pasar dan nilai perusahaan; tidak didukung. Selanjutnya *market value added* dapat memediasi pengaruh kinerja keuangan terhadap nilai perusahaan, namun *market value added* tidak mampu memediasi pengaruh kinerja pasar terhadap nilai perusahaan.

Kata kunci: kinerja keuangan, kinerja pasar, nilai tambah pasar, nilai perusahaan.

JEL: C23; E22

## 1. INTRODUCTION

Stock price transactions through the Stock Exchange occur if the company has an IPO (Initial Public Offering), the difference between the market price and the nominal value indicates that the company's value has increased. The capital market is defined as the activity of offering securities to the public (Law No. 8 of 1995).

The Market Value Added tool is used to measure the amount of profit earned through capital from investor investment. Companies that successfully create profits for investors have a positive MVA value, meaning that the rate of return exceeds the cost of capital used. The investor's decision to buy shares is seen from the high MVA value, which means that the company has good financial performance.

President Joko Widodo changed Law No. 3 of 2020 on Mineral and Coal Mining to Law No. 4 of 2009 on June 10, 2020, because it was no longer in accordance with legal needs and developments in mineral and coal affairs. This makes researchers interested in choosing mining companies as research objects because the Minerba Law provides legal certainty for business investment.

Research conducted by Zamzany et al (2018), Sujatmiko (2019), Untari et al (2020), Marianti (2020), Aprilia & Wahjudi (2021) Sari (2021), and Utami et al (2021) produce findings that financial performance affects firm value. However, research conducted by Utami & Darmawan (2018), Rahmadewi & Abundanti (2018), and Nainggolan & Wardayani (2020) the findings shows that financial performance does not affect stock prices.

Research conducted by Desiana (2017), Rahmadewi & Abundanti (2018), and Idawanda et al (2021) produced research findings that market performance affects stock prices. This research contradicts the research of Mutiarani et al. (2019), Septian et al (2020), and Danty & Muliati (2021) show that market performance does not affect stock prices.

Based on the background of this research and the findings of similar studies of the factors that affect firm value plural, in the end, the authors decided to conduct a re-study with the title "Analysis of the Effect of Financial Performance and Market Performance on Firm Value with Market Value Added as a Mediating Variable".

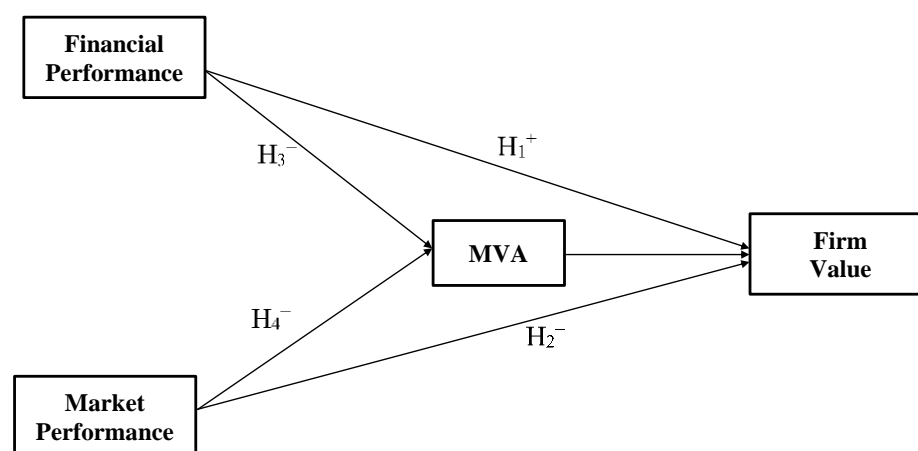


Figure 1. Conceptual Framework

## **2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT**

### **2.1 Signal Theory**

Owners convey information about the condition of the company to investors in the form of signals. The signal in question is news, the cost incurred by the company on bad news is more expensive than good news which means that investors are not interested in bad news. (Spence, 1973).

### **2.2 Financial Performance**

The financial condition and state of the company are reflected in its financial performance. Financial performance is measured by the amount of asset benefits used in creating profits for investors, which defines Return on Assets (Tandellin, 2010) in (Sari, 2021).

### **2.3 Market Performance**

The company's market performance is an independent variable through market ratios as measured by the Price Earning Ratio. Market performance reflects how prospective a company is in the eyes of shareholders as seen from the company's value in the capital market. Ardiyanto et al (2020) explains that the assessment of the high-cheap value of the company is seen by the Price Earning Ratio.

### **2.4 Company Value**

Evidence of company ownership that gives voting rights reflects the value of the company. The company value in this study uses the stock price, the stock price occurs in a short time influenced by the buying and selling of shares on the IDX.

### **2.5 Market Value Added**

The mediating variable in this study uses MVA. The difference between stock market value and investor equity capital that measures financial performance seen from the outside of the company becomes a concept in Market Value Added.

## **HYPOTHESIS DEVELOPMENT**

### **The Effect of Financial Performance on Company Value**

Financial performance is defined as a measure of the success of managers to create goals for all stakeholders. The higher the contribution of assets in creating profit, meaning that the level of investor return is also high, this statement can be measured by Return on Asset. Untari et al (2020), Ardiyanto et al (2020), Takaful et al (2021), and Sari (2021) have empirically proven that firm value is influenced by performance. The increase in company value is seen from the high value of company performance which provides a good signal to investors to invest, from this explanation our first hypothesis is formed:

**H<sub>1</sub>: Financial Performance Affects Firm Value.**

### **The Effect of Market Performance on Firm Value**

Increasing the value of companies in the capital market can be seen through market performance. Market performance shows how the company performed in the past and the company's future achievements. The price-earning ratio measures the growth prospects seen from the company's stock earnings. A high PER value indicates an increased company value so that it has the potential to benefit from the difference in share prices that occur.

Desiana (2017), Juliani et al (2018), and Idawanda et al (2021) have empirically proven the relationship between market performance and firm value. Good signals received by

investors will have an impact on the higher company value. This explanation forms our second hypothesis:

**H<sub>2</sub>:** Market Performance Affects Firm Value.

### **The Effect of Market Value Added as an Intervening Variable between Financial Performance and Company Value**

Firm value reflects the company's success in managing financial performance. MVA greater than 0 means that a high MVA indicates an increasing share price. The effect of financial performance on firm value was studied by Sujatmiko (2019), Kirana et al (2020) and Sari et al (2021) shows that company value is influenced by financial performance. Natalia et al (2020) and Octaviany et al (2021) prove that firm value is influenced by MVA. The above explanation forms our third hypothesis:

**H<sub>3</sub>:** Financial Performance affects Firm Value with Market Value Added as an intervening variable.

### **The Effect of Market Value Added as an Intervening Variable between Market Performance and Company Value**

A high share price indicates the prosperity received by investors, which means the value of the company increases. A large MVA value indicates that managers are successfully managing the company, which means an increase in share price. Juliani *et al* (2018) and Idawanda et al (2021) their findings indicate that firm value is influenced by market performance. The effect of MVA on firm value was studied by Utami & Darmawan (2018) and Sari *et al* (2021) who have proven that firm value is influenced by MVA. This explanation can form our fourth hypothesis:

**H<sub>4</sub>:** Market Performance affects Firm Value with Market Value Added as an intervening variable.

## **3. RESEARCH DESIGN**

Secondary data is used in taking data sources, researchers use panel data. The purposive sampling method was used in sampling, with the following criteria with mining companies are listed on the main trading board and annual financial reports and stock price data are available for the years 2018-2020.

### **3.1 Operational Definition of Variables**

The share price reflects the ownership rights of the company held by each investor. The closing price is the last traded price of the security which is the share price in the study. Financial performance is proxied by Return on Assets to measure the benefits of assets to create profits. ROA measurement is determined by income after interest and tax divided by total assets.

Market performance is proxied by Price Earnings Ratio to assess stock prices based on the company's performance in generating net income. PER is measured by the price per share of common stock divided by net income per share. Market Value Added as a mediating variable used as a tool that measures company performance. MVA is measured by multiplying the share price by the number of shares outstanding and then adding total equity.

### **3.2 Descriptive Statistical Analysis**

The variables used in this study will be described in detail in statistics which can be seen

from the mean, variance, maximum, minimum, and standard deviation.

### 3.3 Classical Assumption Test

The classic assumption tests in this study are the normality test is used to check the normality of the data by conducting Kolmogorov-Smirnov testing with a sig value  $>0.05$  and by looking at the inverted bell-shaped histogram table. The multicollinearity test is used to see the correlation between independent variables. Data to be correlation-free if it has tolerance  $>0.1$  and VIF  $< 10$ .

The heteroscedasticity test serves to test the inequality of residuals between observations. This test can be done with the Glejser test which uses a significant level  $>0.05$ , meaning that it does not contain symptoms of heteroscedasticity. Autocorrelation test to determine the relationship between time (t) and the previous time (t-1) in regression. The test can be done with the run test, with sig  $>0.05$  the data is declared free from indications of autocorrelation.

### 3.4 Multiple Linear Regression Analysis

Based on the research path diagram framework, two regression equation models were produced:

$$\text{MVA} = \text{KK} + \text{KP} + \varepsilon_1 \quad \dots\text{Equation 1}$$

$$\text{NP} = \text{KK} + \text{KP} + \text{MVA} + \varepsilon_2 \quad \dots\text{Equation 2}$$

Description:

NP: dependent variable (firm value)

MVA: mediating/intervening

KK&KP: independent variables (financial performance & market performance)

$\varepsilon_1$ & $\varepsilon_2$ : error

### 3.5 Coefficient of Determination Test ( $R^2$ )

This test is useful for knowing the value of  $R^2$  with a range between 0 and 1. Researchers use the magnitude of the influence of the independent variable on the dependent variable Adjusted R value<sup>2</sup> because it is said that the value can fluctuate when the independent variable is more than 1. (Ghozali, 2009).

### 3.6 F test

Simultaneously the independent variable affects the dependent variable through this test, using an alpha level of 5%. The criterion  $H_0$  is rejected if sig  $<0.05$  or  $F_{\text{count}} > F_{\text{tabel}}$ , then the independent variable is said to affect the dependent variable simultaneously.

### 3.7 t Test

Partially, the independent variable affects the dependent variable through this test using a significance level of 5%. The basis for determining the hypothesis is determined if Sig  $>0.05$ , meaning that  $H_0$  is accepted which interprets that the independent variable partially has no effect on the dependent variable.

### 3.8 Sobel Test

Mediating variables in a study can be tested using the Sobel test. It is said to be a mediating variable if the variable has an influence between the independent and dependent variables. (Baron & Kenny, 1986).

## 4 RESULT AND DISCUSSION

Table 1 Sample Description

Firms	Recorded	Year			Amount	Percentage
		2018	2019	2020		
<i>Population data listed on the board:</i>						
Acceleration	0					
Development	41					
Major	36				77	1.00
<i>Sample data:</i>						
Major Company	36					1.00
Incomplete financial report		7	3	1	11	0.31
Complete financial report		29	33	35	25	0.69

Resource: <https://www.idx.co.id/>

Based on the sample description table of mining companies above, it can be observed that there are 77 mining companies. Researchers took samples based on companies that occupy the main trading board. The main trading board is taken by researchers because the companies included in the list are companies that have been operating  $\geq 36$  months, financial statement data has been audited for 2 years, and net tangible assets  $\geq$  IDR100 billion (www.idx.co.id, accessed July 7, 2022). There are 36 mining companies that occupy the main trading board, but 11 (31%) companies were found that did not meet the sampling criteria such as financial statement data in the 2018-2020 timeframe was not available, the audit report was not found, and the share price in that year was not available. This reduced the sample in our study to 25 (69%) mining companies with a 3-year time span from 2018-2020.

### 4.1 Statistika Deskriptif

Table 2 Description of Research Variables

Model	N	Minimum	Maximum	Mean	Std. Deviation
KK_ROA	75	-0.4586	0.7483	0.035858	0.1456872
KP_PER	75	-241.859	665.945	8.265.271	152.170.864
MVA	75	-0.877	37.956	0.255845	0.9589527
NP	75	0.0034	13.421	0.159028	0.3101145

The table above contains a summary description of the variables used in the study. Financial performance measurement is proxied by ROA (Return on assets)= earning after interest and tax/total assets, while market performance PER (Price Earning Ratio)= market price per share/earning per share, MVA (Market Value Added)=(share price\*shares outstanding)-total own capital, and the value of the company is proxied by the share price=closing price.

Based on this table, shows the max, min, mean, and std. deviation of the financial performance variables, market performance, MVA, and firm value with the following details the financial performance variable proxied by ROA has a sample size of 75, a minimum value of -0.458, a maximum value of 0.748, and a mean value of 0.035 with a deviation of 0.145; the market performance variable proxied by PER has a sample size of 75, a minimum value of -241.85, a maximum value of 665.94, and a mean value of 8,265 with a deviation of 152.17; *the market value added* variable has a sample size of 75, a minimum value of -0.877, a maximum value of 37.95, and a mean value of 0.255 with a deviation of 0.958.

The firm value variable has a sample size of 75, a minimum value of 0.0034 and a

maximum value of 13.42, and a mean value of 0.159 with a deviation of 0.310.

### 4.2 Classical Assumption Test

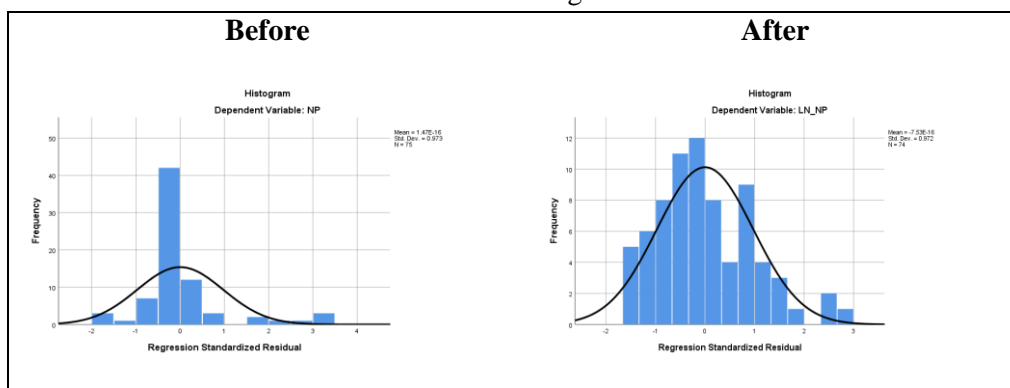
In normality testing, this research data has different units, so it is necessary to transform the data into Ln form to reduce the scale and normalize the data. Data transformation to the natural logarithm (Ln) is used with the aim of changing the residual value so that it is normally distributed. Before and after transformation are shown in the following table:

Table 3 Normality Test

<b>One-Sample Kolmogorov-Smirnov Test</b>			
		Unstandardized Residual	
		<b>Before</b>	<b>After</b>
N		75	74
Normal Parameters	Mean	.0000000	.0000000
	Std. Deviation	.25890746	132.997.978
Most Extreme Differences	Absolute	.219	.082
	Positive	.219	.082
	Negative	-.170	-.046
Test Statistic		.219	.082
Asymp. Sig. (2-tailed)		<b>.000</b>	<b>.200</b>

Normality test using Kolmogorov-Smirnov before transforming sig 0.00 < 0.05 does not meet the requirements of normally distributed data. After transforming using the natural logarithm (Ln), sig 0.200 > 0.05 is obtained, which indicates that the data is normally distributed. The following is a display of histogram analysis:

Table 4 Histogram



Before data transformation, the histogram does not look like an inverted bell, concluding that the data is not normal. After data transformation to the natural logarithm (Ln), the histogram does not look skewed to the right or left and is in the shape of an inverted bell.

Table 5 Multicollinearity Test

<b>Coefficients<sup>a</sup></b>					
Model	<b>Before</b>		Model	<b>After</b>	
	Collinearity Statistics			Collinearity Statistics	
	Tolerance	VIF		Tolerance	VIF
KK ROA	.879	1.137	LN KK ROA	.937	1.067
KP PER	.955	1.047	LN KP PER	.994	1.006
MVA	.939	1.065	LN MVA	.947	1.056

The table shows that before and after the transformation, the variables in this study show a tolerance value > 0.10 and a VIF (Variance Inflation Factor) value < 10. It is concluded that there is no multicollinearity between the independent variables in the regression model.

Table 6 Heteroscedasticity Test

Coefficients <sup>a</sup>					
Before Transformation					
Model	Unstandardized		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.139	.023		6.035	.000
KK ROA	.259	.145	.187	1.787	.078
KP PER	-.002	.001	-.123	-1.225	.225
MVA	.106	.021	.505	4.975	.000
After Transformation					
(Constant)	-.121	.939		-.128	.898
LN KK ROA	-.893	1.039	-.104	-.860	.393
LN KP PER	.255	.162	.185	1.574	.120
LN MVA	.137	.188	.088	.729	.469

The heteroscedasticity test in this study uses Glejser testing, the table before the transformation of other variables besides MVA shows a sig value > 0.05, while the MVA variable shows a sig value of 0.00 < 0.05 so it is said that heteroscedasticity occurs. After the transformation of the independent variable shows a sig value > 0.05, meaning that heteroscedasticity does not occur.

Table 7 Autocorrelation Test

Runs Test		
	Unstandardized Residual	
	Before	After
Test Value <sup>a</sup>	-.06521	.03405
Cases < Test Value	37	36
Cases >= Test Value	38	36
Total Cases	75	72
Number of Runs	30	36
Z	-1.975	-.237
Asymp. Sig. (2-tailed)	.048	.812

The autocorrelation test in this study uses the run test, in the table before the transformation the sig value < 0.05, meaning that in each variable there is autocorrelation. After the transformation, the sig value is 0.812 > 0.05, meaning that no autocorrelation symptom.

## 5 KESIMPULAN

The financial performance variable calculated using ROA has an influence on firm value. The company must make good use of its assets in increasing company value because the fewer idle assets the greater the operational activities that occur in the company. Market performance variables proxied by PER have no effect on firm value. PER which is measured from the share price divided by the EPS value, researchers found that the EPS data used in this study mostly had negative EPS. This affects the amount of profit distributed to investors, so companies also need to pay attention to the EPS value.

The MVA variable is able to mediate financial performance and firm value. The difference created by management between the company's equity and the equity invested by the company is considered capable of increasing the company's value. This happens because financial performance proxied by ROA is able to provide good signals to investors, resulting in an increase in stock prices. MVA variables are unable to mediate market performance and



firm value. Market performance proxied by PER gives a bad signal in the capital market, in our opinion, this happens because of the EPS data which is mostly negative. A negative EPS value occurs when the equity value is negative or the company continuously posts losses that will erode the value of the company, resulting in capital deficiency (a condition where liabilities exceed the value of assets).

The following are suggestions that can be conveyed after examining this research for companies, it is hoped that they can optimize financial performance and market performance with their respective proxies in managing finances in order to increase company value. Towards the investors, it is hoped that they can pay more attention to the financial performance that has a significant effect on company value before investing. In addition, the use of more than one analysis can be used by investors as a basis for making investment decisions, because the more assessments used the better the investment decision. In future research, it is expected to use stock price conditions on the stock exchanges of other countries to enrich the research results.

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