

# Fundamental Analysis that Affects Stock Returns of the Coal Mining Sub-Sector on the Indonesia Stock Exchange 2015-2020

Fendiardo Hermansyah  
Master of Management, Faculty of  
Economics and Business  
Mercu Buana University,  
Indonesia

Pardomuan Sihombing  
Master of Management, Faculty of  
Economics and Business  
Mercu Buana University,  
Indonesia

**Abstract:-** This study aims to determine the factors that influence stock returns of coal mining sub-sector companies listed on the Indonesia Stock Exchange. With a population of 30 companies and research samples that pass the criteria as many as 16 companies. The method used in this research is panel data regression analysis. With data processing software using Stata 16. The results showed that the microeconomic variables of sales growth, debt to asset ratio, and return on assets had no effect on stock returns.

**Keywords:-** Return saham, sales growth, debt to asset ratio, return on asset.

## I. INTRODUCTION

Coal is one source of energy that comes from nature. Coal is used for combustion that produces heat and steam, where the energy produced from coal is used as a source of electricity generation both in Indonesia and in the world.

In 2025 it is planned to use a new energy policy whose proportion is determined based on the energy source, namely 30% for gas-based sources, 20% for oil-based sources, followed by coal with a proportion value of 33% and renewable energy at 17%. The biggest consumer of coal in Indonesia is still dominated by the power generation sector. This sector experienced a very significant increase in consumption of coal fuel sources, from 56 million tons in 2006 and is still expected to increase until 2025 to an estimated value of 123.2 million tons.

In line with the plan to increase the fulfillment of energy needs, the Indonesian government has made a plan for domestic coal absorption. Investment can be interpreted as the dedication of an asset with the aim of getting an increase in value within a specified period of time. Investors who invest in companies in the coal mining sector need to see what the development of stock returns in the sector is in line with the development of consumption needs or the coal market.

## II. LITERATURE REVIEW

### A. Signaling Theory

Signal theory was introduced by Spence for the first time in 1973, where Spence argued about the signal and what the signal conveyed, then in his research on the capital market associated with economic indicators. In 1977, Leland and Pyle discussed the theory for finance, both stating that entrepreneurs hold their shares based on information from economic indicators.

### B. Return

Return on investment activities is income obtained from investment activities, then added with changes in market prices, which are also referred to as percentages of the initial market prices for these investment activities. When the selling price of the stock is higher than the purchase price, the higher the return that investors will get. Yocelyn and Christiawan in Simorangkir (2019) explain that the rate of return of a stock is highly considered by investors in making investment decisions.

$$R_t = \frac{P_{t+1} - P_t}{P_t} \times 100\%$$

### C. Financial Performance

Financial performance is an analysis conducted to see the extent to which a company has implemented it using financial implementation rules properly and correctly. One way to measure the financial performance of a company is to analyze financial statements. In analyzing financial statements, a measure is needed as the basis for making interpretations. A measure that is widely used is the ratio. This ratio analysis is very diverse, depending on the needs or objectives of the analysis. Based on the type, the company's financial ratios can be grouped into:

- Liquidity ratio is a ratio that measures the company's ability to meet the company's short-term obligations
- Activity Ratio is a ratio that measures how much the effectiveness and efficiency of the company in moving its resources or assets.
- Solvency Ratio is a ratio that measures the company's ability to meet the company's long-term obligations.
- Profitability Ratio is a ratio that measures the company's ability to generate profits (profitability) from a certain level of sales, assets, and share capital.

**D. Sales Growth**

Fahmi in Herianto (2020) states that the growth ratio is a ratio used as a measure of how much a company's ability to maintain its position in the industry and economic development in general is. In a company, a company's growth ratio can be measured from an assessment of the company's sales growth. Growth in the sales sector in a company can be linked as a consideration by investors to invest their assets. Companies that have a significant growth value are expected to provide high profits in the future so that investors are interested in investing their assets in the company.

$$SG_t = \frac{S_{t+1} - S_t}{S_t} \times 100\%$$

**E. Debt to Asset Ratio (DAR)**

According to Sihombing (2018), another approach to calculating the debt to capital ratio is by connecting the total debt to total assets or the debt to asset ratio (DAR). A high DAR ratio indicates the company uses high debt or financial leverage. The use of debt has two sides, namely increasing profitability and increasing risk. The use of debt in a company can aim to increase business through business development, then it can be used as investment capital to increase capacity or infrastructure to support revenue generation.

$$DAR = \frac{\text{Total Debt}}{\text{Total Asset}}$$

**F. Return on asset (ROA)**

Return on assets is part of the profitability ratio analysis. Return on assets is the ratio between net income which is inversely proportional to the overall assets to generate profit. According to Sihombing (2018), Profitability Ratios are measured using the relationship between net income and total assets. In other words, return on assets (ROA) measures the company's ability to generate net income based on a certain level of assets. Kasmir in Simorangkir (2012) explains that return on assets is a ratio that shows the results (return) on the number of assets used in the company. In other words, Return on assets can be defined as a ratio that shows how much net income can be obtained from all the assets owned by the company. The better the ROA of a company, the better the return on investment of a company where this is one of the considerations for investors to decide on an investment plan.

$$ROA = \frac{\text{Net Profit}}{\text{Total Asset}}$$

**III. RESEARCH METHOD**

The design used in this study is a research with a causal model, a causal relationship is a causal relationship. Causal analysis aims to test the hypothesis about the effect of one or more independent variables (independent variable) on the dependent variable (dependent variable) using panel data regression analysis.

This study conducts an empirical analysis of the effect of fundamentals (sales growth, DAR, ROA) on stock returns in coal mining sub-sector companies listed on the Indonesia Stock Exchange for the 2015-2020 period on stock returns in coal mining sub-sector companies listed on the Indonesia Stock Exchange. 2015-2020 period.

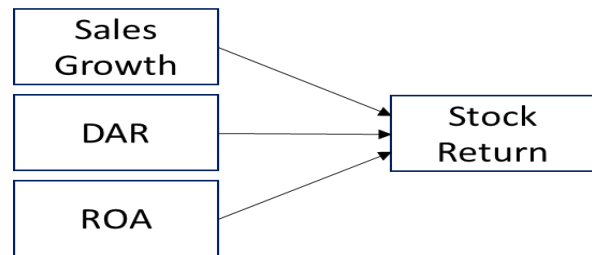


Fig. 1: Conceptual Framework

Data processing is carried out using Stata 16 software to determine the regression model as well as testing the selected model.

**A. Population**

The total population in this study were 30 coal mining companies listed on the Indonesia Stock Exchange.

**B. Sample**

Sampling companies in this study using purposive sampling method, namely samples that will be taken based on certain criteria with the aim of getting a representative sample in accordance with predetermined criteria. The sample in this study can be seen in figure 2.

Criteria	Quantity
Coal mining sub-sector companies listed on the Indonesia Stock Exchange (IDX) consecutively in the period 2015 – 2020	30
Coal mining sub-sector companies that publish company financial reports for the period 2015 – 2020 to the IDX	17
Coal mining sub-sector companies that do not have negative equity.	16
<b>Number of Research Samples</b>	<b>16</b>

Fig. 2: Population & Sample

**IV. RESULT AND DISCUSSION**

The data in this study are in the form of complete company annual financial statements from 2015-2020 as many as 16 companies obtained from the Indonesia Stock Exchange. From the data that has been collected by the steps in the data collection method discussed earlier then processed into data that can be analyzed statistically.

**A. Descriptive Statistical Analysis**

Descriptive statistical analysis is a general description of the research variables. The following is research data that has been analyzed descriptively.

Variable	Obs	Mean	Std. Dev.	Min	Max
SG	96	.1045927	.4803609	-.5892668	2.303599
DAR	96	.4366592	.214555	.0880397	.9714739
ROA	96	.0880752	.1086563	-.0872185	.4555789

Fig. 3: Result Descriptive Statistical

The results of data processing show that the average value of the sales growth (SG) variable is 10.4% with the standard deviation of the sales growth data being 48%. The lowest value of SG when it decreased by -58.9%.

The results of data processing show that the average value of the debt to asset ratio (DAR) variable is 43.6% with the standard deviation of the debt to asset ratio data being 21.4%. The lowest value is 8.8%

The results of data processing show that the average value of the return on assets (ROA) variable is 8.8% with the standard deviation of the return on assets data being 10.8%. The lowest value is -8.7%.

**B. Panel Data Regression Analysis Results**

This study uses regression analysis in the form of panel data. According to Sivilianto and Endri (2019), panel data regression analysis is a regression analysis with a combined data structure between cross section and time series data. The right model used in this study is the common effect model (CEM) because after going through the three model selection tests, CEM is the best model chosen for this study.

Fixed-effects (within) regression	Number of obs =	96
Group variable: Kode	Number of groups =	16
R-sq:	Obs per group:	
within = 0.3166	min =	6
between = 0.0837	avg =	6.0
overall = 0.2770	max =	6
	F(6,74) =	5.71
corr(u_i, Xb) = -0.1997	Prob > F =	0.0001

ReturnSaham	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
SG	-.0580041	.2854887	-0.20	0.840	-.6268528 .5108446
DAR	1.430933	1.510085	0.95	0.346	-1.577976 4.439842
ROA	2.125648	1.857059	1.14	0.256	-1.574624 5.82592

Fig. 4: Common Effect Model

**C. Effect of Sales Growth on Stock Return**

Panel data regression results show the coefficient value of the Sales Growth variable is -0.18 where the probability value is 0.409. This means that probability > 0.05, then H<sub>0</sub> is accepted and H<sub>1</sub> is rejected, so it can be concluded that Sales Growth has no effect on Stock Return. The results of this study can be caused by the model of coal demand in the world market, where the system used is a futures contract so that it does not directly reflect the actual level of demand. In addition, inefficient management makes increased sales have no impact on profits and affects stock prices in the market.

**D. Effect of Debt to Asset Ratio on Stock Return**

Panel data regression results show the coefficient value of the Debt to Asset Ratio variable is 0.71 where the probability value is 0.15. This means that the probability > 0.05, then H<sub>0</sub> is accepted and H<sub>1</sub> is rejected, so it can be concluded that the Debt to Asset Ratio has no effect on Stock Return. The level of debt in the coal mining companies that are the sample of this study is relatively high, this can cause investor sentiment towards the expected rate of return to fall because the risk is too large for the investor's point of view.

**E. The Effect of Return on Assets on Stock Returns**

Panel data regression results show the coefficient value of the Return on assets variable is 0.95 where the probability value is 0.35. This means that probability > 0.05, then H<sub>0</sub> is accepted and H<sub>1</sub> is rejected, so it can be concluded that Return on assets has no effect on Stock Return. The results of this study can be caused by the profitability of the coal companies that are the sample of the study, which tends to fluctuate following the development of prices and contracts for global coal market demand. This, of course, does not directly affect stock price sentiment in the market.

## V. CONCLUSION

In this research, there are 3 independent variables and 1 dependent variable and then analyzed using panel data regression method. The independent variables Sales Growth, DAR, and ROA have no effect on stock returns. This variable has a positive coefficient. Based on this, it is advisable for investors to always consider factors originating from macroeconomics such as coal prices in the market, country inflation, and the exchange rate or exchange rate before deciding to invest in the stock market.

## REFERENCES

- [1.] Herianto, D., & Majidah. (2020). Pengaruh Profitabilitas, Leverage, Pertumbuhan Penjualan, Ukuran Perusahaan Terhadap Return Saham (Studi Empiris Pada Perusahaan Manufaktur Sub Sektor Makanan Dan Minuman Yang Terdaftar Di Bursa Efek Indonesia Periode 2014-2018). *E-Proceeding Of Management*, 7 (1), 935-944.
- [2.] Sihombing, Pardomuan. (2018). *Corporate Financial Management*. IPB Press. Bogor.
- [3.] Simorangkir, R.T.M.C. (2019). Pengaruh Kinerja Keuangan Terhadap Return Saham Perusahaan Pertambangan. *Jurnal Bisnis dan Akuntansi*, 21 (2), 155-164.
- [4.] Leland, H. & Pyle, D. (1977). Information Asymetries, Financial Structure, And Capital Structure Theory. *Journal Of Finance*, 32 (2), 371-387
- [5.] Ross, S.A. (1977). Determination Of Financial Structure: The Incentive-Signalling Approach. *Bell Journal Of Economics*, 8, 23-40.
- [6.] Spence, A.M. (1973). Job Market Signal. *Quarterly Journal Of Economics*, 87, 355-374.
- [7.] Sivilianto, H. & Endri. (2019). Determinants Of External And Internal Stock Price Of Coal Mining Subsector Companies Period 2005-2017. *Scholars Middle East Publishers*, Dubai, United Arab Emirates, 5 (4), 162-168. <https://doi.org/10.21276/Sb.2019.5.4.5>.