

# The Effect of Financial Performance on Stock Return in Coal Mining Companies Registered in Indonesia Stock Exchange

Rony Marthin Sitohang<sup>1</sup>, Dr. Iman Sofian Suriawinata<sup>2</sup>, Dr. Rimi Gusliana<sup>3</sup>  
<sup>1,2,3</sup> Indonesian College of Economics  
Jakarta, Indonesia.

*Abstract—This study aims to examine the effect of profitability, liquidity, asset structure, and company size on the capital structure of mining companies in this study aims to examine whether there is an influence of the current ratio, debt to equity ratio, total asset turnover and return on assets on stock returns on the company coal mining which is listed on the Indonesia Stock Exchange (IDX). This study uses a comparative research type, which is measured using a method of multiple linear regression based on the Eviews 11 program. The population of this study is coal mining companies listed on the Indonesia Stock Exchange (BEI) in 2013 to 2017. The sample is determined based on the method purpose sampling, with a total sample of 19 coal mining companies so that the total observations in this study were 95 observations. The data used in this study are secondary data. Data collection techniques use the method of documentation through the official website of IDX: [www.idx.co.id](http://www.idx.co.id), [www.investing.com](http://www.investing.com) and [www.sahamok.com](http://www.sahamok.com). Hypothesis testing using *t* test. The results prove that CR, DER and ROA affect the coal mining company hospitals listed on the Indonesia Stock Exchange in the 2013-2017 period. While TATO has no effect on the coal mining company hospitals listed on the Indonesia Stock Exchange in the 2012-2017 period.*

*Keywords—:Stock Return (RS), Current Ratio (CR), Debt to Equity Ratio (DER), Total Asset Turnover (TATO), Return on Assets (ROA).*

## I. INTRODUCTION

Indonesia has abundant mining wealth and is the main attraction for companies engaged in mining to operate in Indonesia. Some of the products of Indonesian mining companies are important commodities for the world such as coal, oil and gas, rock mining, and other mining commodity products. Researchers chose the coal mining sector as the subject of research because Indonesia is one of the

largest coal producing and exporting countries in the world and this sector is one of the state revenue contributors that can potentially advance the country's economy, in addition, it is rare that research selects stone mining companies. ember as a sample.

There are 23 coal mining companies that have been registered in the capital market. We know that the capital market itself has a very important role for a country's economy. The capital market itself is an investment vehicle in the form of shares, where potential investors will diversify their investments. Information notified by issuers will influence potential investors in making efficient investment portfolio selection decisions.

To know that stocks have a huge risk in the long run. Therefore, investors need to pay attention in choosing the company's shares to be bought. If the investor is wrong in choosing the shares to be purchased, the consequences will experience a substantial loss.

Issuance of shares is one of the choices for companies when deciding to obtain funding. On the other hand, stocks are an investment instrument that many investors choose because the stock is able to provide an attractive level of profit. Shares are capital participation of a person or legal entity in a company, with a person or legal entity including the capital, the party has a claim on the company's income.

Stock is one alternative that can be chosen to invest and if an investor buys shares of a company, it means that the investor has ownership rights of the company over the shares that he has invested. In addition, stock investment has several advantages, namely dividends and capital gains. Dividends are the distribution of profits provided by the company issuing shares on profits generated by the company.

The dividend is given after obtaining approval from the shareholders at the GMS.

Another advantage gained by shareholders is capital gain, where capital gain is the difference between the purchase price lower than the selling price. Capital gains are formed by trading activities on the secondary market. There are risks that might arise due to buying shares, among others: not getting dividends, capital loss, and the company is bankrupt or liquidated.

With the opportunities in the capital market, companies are competing to trade their shares. By trading its shares on the capital market on the Indonesia Stock Exchange, the company can obtain funds. For investors, investments chosen in securities that are expected to provide a rate of return (return) is also large according to the risk that can be borne by investors. And from the investor side, which is used as the main factor by investing capital in companies that need funds in order to obtain profits from what is invested, this is called return.

The financial performance of a company can be seen from the financial statements, based on the financial statements, investors can provide an assessment of the company's financial performance, especially in making decisions to invest. For owners or shareholders, the financial statements serve to see the rate of return reflected in the income statement and the amount of dividends that are entitled to shareholders.

The company must improve its financial performance so that the company continues to attract investors to invest in shares. Before investors decide to invest, investors first assess the company's financial performance. Measurement of financial performance can use a variety of analysis, one of which uses financial ratio analysis.

Analysis of the company's financial ratios is used to measure the strengths or weaknesses of a company from its financial aspects. For investors or creditors who will invest funds in a company through the capital market will definitely judge based on the company's financial performance through financial ratios. The financial ratios used in this study include liquidity ratios, leverage ratios, activity ratios and profitability ratios.

Liquidity ratio is an indicator of a company's ability to pay all financial obligations in the short term at maturity using available liquid assets. In this study the liquidity ratio is proxied by the current ratio (CR). Researchers use the CR ratio because this ratio is always used by investors, banks and other regulators such as OJK / BI to assess the soundness of a company.

Current Ratio shows the company's ability to pay its debts in the short term. The results of research conducted by Oktavia and Norita (2016) concluded that Current Ratio (CR) had a positive and significant effect on stock returns on telecommunications companies on the Indonesia Stock Exchange in the period 2010-2014, while research conducted by Stefano (2015) concluded that Current Ratio (CR) has no significant effect on stock returns on property companies on the Indonesia Stock Exchange in the 2009-2013 period.

Leverage ratio is the company's ability to meet obligations in the long run. In this study the leverage ratio is proxied by Debt to Equity Ratio (DER). Researchers use the DER ratio because this ratio is always used by investors, banks and other regulators such as OJK / BI to assess the soundness of a company.

Debt to Equity Ratio is used to determine the ability of a company to what extent the company is funded by debt, so that it will know the burden of the company in meeting the debt given by creditors. The results of research conducted by Nidianti (2013) concluded that the debt to equity ratio has an effect on stock returns on food and beverage companies on the IDX period 2008-2011, while research conducted by Oktavia and Norita (2016) concluded that the debt to equity ratio has no effect of stock returns on telecommunications companies on the IDX for the period 2010-2014.

Activity ratio is a ratio that describes the extent to which a company uses its resources to support the company's activities, where the use of these activities is carried out very maximally with the intention of obtaining maximum results. In this study the activity ratio is proxied by Total Asset Turnover (TATO). Researchers use the TATO ratio because this ratio is always used by investors, banks and other regulators such as OJK / BI to assess the soundness of a company.

Total Asset Turnover (TATO) is one of the activity ratios. Where, this ratio is used to measure how optimal the company's ability to generate sales based on all assets owned. The results of research conducted by Yuliantari and Sujana (2014) concluded that total asset turnover has an effect on stock returns on food and beverage companies on the Stock Exchange in the period 2010-2012, while research conducted by Pratiwi and Putra (2015) concluded that total asset turnover has no effect of stock returns in all companies on the Indonesia Stock Exchange 2011-2013.

Profitability ratios are the ability of a company to make a profit in relation to sales, assets or total assets or equity. In this study the profitability ratio is proxied by Return On Assets (ROA). Researchers use

the ROA ratio because this ratio is always used by investors, banks and other regulators such as OJK / BI to assess the soundness of a company.

Return on assets (ROA) is a ratio used to measure the effectiveness of a company in generating profits by utilizing its assets. The results of research conducted by Anwaar (2016) concluded that Return on assets has a positive and significant effect on stock returns in companies listed on the FTSE, London Stock Exchange for the period 2005-2014, while research conducted by Meesuan (2015) concluded that ROA no significant effect on stock returns on companies listed on the Stock Exchange of Thailand for the period 2006-2014.

Based on the results of previous studies where many of the variables used have an effect or not significantly different effect on stock returns. In addition, the research objects studied were also different by the company. Therefore, researchers are interested in doing another study entitled the effect of financial performance on stock returns, but the companies that will be examined are coal mining companies listed on the Stock Exchange in the period 2013 - 2017.

## II. LITERATURE REVIEW

### A. *Research Review*

The first study by Safitri and Indriani (2017) This study aims to examine the measurement of financial performance that is described by Return On Assets, Return on Equity, Economic Value Added, Debt to Equity, Size and Systematic Risk and their effects on stock returns. The problem in this study arises because of the research gap between the results of previous studies. The population in this study are all companies included in the classification of the pharmaceutical industry that have gone public and their shares are listed on the Indonesia Stock Exchange (IDX) in 2013-2015. The sampling technique used was purposive sampling. This study uses secondary data in the form of financial statements and stock prices of companies that are the objects of this study. The analytical model used to test hypotheses is multiple regression analysis conducted with the help of SPSS version 23. Partial statistical tests on each independent variable indicate that ROA, ROE, EVA, DER and SIZE have a positive effect on stock returns, but do not significant. While SYSTEMATIC RISK has a significant effect and has a positive influence on stock returns. Simultaneous statistical tests show that all independent variables (ROA, ROE, EVA, DER, SIZE and SYSTEMIC RISK) do not affect stock returns.

The second researcher by Anwaar (2016), that this study was conducted to examine the impact of company performance on stock returns, evidence

from companies listed on the FTSE-100 Index, London Stock Exchange during the period 2005 to 2014. In Earnings per share, quick ratio, return on assets, return on equity, and net profit margin are used as independent variables, while stock returns are used as the dependent variable. Panel regression analysis method is used for data analysis. The results show that net profit margin, return on assets have a significant positive effect on stock returns, while Earnings per share have a significant negative effect on stock returns. When Earnings per share will increase, than all investors who want short-term profits and are aware of dividends to sell their shares to the market because in the near future Earnings per share of the company will decrease due to oversupply of shares, while return on equity and quick ratios show no impact significant to stock returns.

The third study was conducted by Mariani et al (2016) that this study aims to obtain tested explanative findings on the effects of: profitability and leverage on stock returns, profitability on stock returns, leverage on stock returns on food and baverage companies that go public on the stock exchange Indonesia for the period 2011-2014. The research design used in quantitative is causal. The research subjects are food and beverage companies that go public on the Indonesia stock exchange, and the object is profitability, leverage, and stock returns. Data were collected by document recording technique, and analyzed by multiple linear regression analysis. The results of this study indicate that there is a positive and significant effect of profitability and leverage on stock returns with a contribution of 52.1%, there is a positive and significant effect of profitability on stock returns with a contribution of 2.6%, there is a negative and significant effect of leverage on stock returns with an influence contribution of 49.3%.

The fourth study by Hariyati et al (2015) that the purpose of this study was to determine the effect of liquidity ratios, leverage, activity and profitability on stock returns in service companies in the Property and Real Estate Sub Sector sectors. The sampling method in this study was purposive sampling and obtained 11 observational data as samples. The data used in this research is secondary data. The data analysis technique used is multiple linear regression using SPSS 20.0. The analytical methods used in this study are descriptive statistics, the classic assumption test and multiple regression analysis and t test. The results showed that the increase in stock returns on companies included in the research list with the assumption that the variable Current Ratio (CR), Debt to Equity Ratio (DER), Total Asset Turnover (TATO), and Return on Equity (ROE) did not change. For the Current Ratio (CR) variable a positive and not significant effect on stock returns, the Debt to Equity Ratio (DER) variable has a

negative and not significant effect on stock returns, Total Asset Turnover (TATO), the variable has a negative and no significant effect on stock returns. while the Return on Equity (ROE) variable has a positive and significant effect on stock returns in the Property and Real Estate Sub Sector service companies.

The fifth study by Tyas et al (2018) that the purpose of this study is how the influence of the analysis of Current Ratio (CR), Debt to Equity Ratio (DER), Total Asset Turnover (TATO) and Return on Assets (ROA) on Stock Return. The population in this study is sector companies in infrastructure, utilities and transportation which are listed on the Indonesia Stock Exchange (IDX) for the 2014-2017 period. The sample selection uses a purposive sampling method. The method used is multiple linear regression analysis with hypothesis testing using t test. The results showed that the Current Ratio (CR) variable had a negative and not significant effect on stock returns. Debt to Equity Ratio (DER) has a positive and not significant effect on stock returns. Total Asset Turnover (TATO) has a negative and not significant effect on stock returns. And Return on Assets (ROA) has a positive and significant effect on stock returns.

### B. Signal Theory

Signaling theory emphasizes the importance of information released by companies on investment decisions of parties outside the company. The information is an important element for investors and business people because the information presents information, notes or pictures both for the past, current and future conditions for the survival of a company and how the market effect. Relevant, complete, accurate and timely information is needed by investors in the capital market as an analytical tool for making investment decisions.

According to Jogiyanto (2014: 392), information published as an announcement will give investors a signal in making investment decisions. If the announcement contains a positive value, then the market is expected to react when the announcement is received by the market. When the information is announced and all market participants have received the information, market participants first interpret and analyze the information as good news or bad news. If the announcement of this information is a good signal for investors, there will be a change in the trading volume of shares. One type of information released by a company that can be a signal to parties outside the company, especially for investors, is an annual report.

When the information is announced and all market participants have received the information, market participants first interpret and analyze the information as a good signal or bad news. If the announcement of this information is a good signal for investors, there will be a change in the trading volume of shares.

### C. Definition of Stock Return

According to Tandellin (2010: 102), "stock return is one of the factors that motivates investors to invest and is also a reward for the courage of investors to bear the risk of investments made". Calculation of stock returns according to Hartono (2014: 201) is as follows:

$$\text{Return} = \frac{P_t - P_{t-1} + Dt}{P_{t-1}} \dots\dots\dots(2.1)$$

Information:

- $P_t$  = stock price (closing price) for time t
- $P_{t-1}$  = Stock price (closing price) for the previous time
- $D_t$  = Periodic dividends

### D. Financial Performance

Financial performance is an analysis conducted to see the extent to which a company has carried out using the rules of financial implementation properly and correctly (Fahmi, 2011: 2). Company performance is a picture of the financial condition of a company that is analyzed with financial analysis tools, so that it can be known about the good and bad financial condition of a company that reflects work performance in a certain period. This is very important so that resources are used optimally in the face of environmental changes.

#### Liquidity Ratio

In addition, according to Syamsuddin (2011: 68), "liquidity ratios are an indicator of a company's ability to pay all short-term financial obligations at maturity using available liquid assets". In this study liquidity is proxied by the current ratio (CR). "Current ratio is the ability of the company's current assets to meet short-term obligations with current assets owned" (Darsono and Ashari, 2005: 52).

According to Sujarweni (2017: 60), "current ratio (CR) is the ratio used to measure a company's ability to pay short-term liabilities using current assets owned".

The formula for calculating Current Ratio (CR) according to Kasmir (2014: 134) is as follows:

$$\text{Current ratio} = \frac{\text{Current Assets}}{\text{Current Liability}} \dots\dots(2.2)$$

**Leverage Ratio**

Understanding leverage according to Hanafi and Halim (2009: 81), "this ratio measures the ability of companies to meet their long-term obligations. This ratio also measures the company's long-term liquidity and thus focuses on the right side of the balance sheet ". This leverage ratio is the company's ability to pay its obligations if the company is liquidated. These ratios include: debt to asset ratio, debt to equity ratio, long term debt to equity ratio, times interest earned and fixed charge coverage. In this study leverage is proxied by Debt to Equity Ratio (DER).

According to Kasmir (2014: 157), "Debt to Equity Ratio is the ratio used to assess debt with equity. To find this ratio by comparing between all debt, including current debt and all equity. " DER calculation is as follows:

$$\text{DER} = \frac{\text{Total Liability}}{\text{Total Equity}} \times 100\% \dots\dots(2.3)$$

**Activity Ratio**

According to Fahmi (2012: 132), "the activity ratio is the ratio that describes the extent to which a company uses its resources to support the activities of the company, where the use of these activities is carried out very maximally with the intention of obtaining maximum results". This ratio includes: receivable turnover, inventory turnover, working capital turnover, fixed asset turnover and total asset turnover. In this study the activity ratio is proxied by Total asset turnover (TATO).

According to Syamsuddin (2011: 73), "Total Assets Turnover is to measure the number of times the total assets of the company generate sales, this can also be interpreted as Total Assets Turnover measures the turnover of all assets owned by the company and measures how many sales earned from each asset rupiah". TATO calculations are as follows:

$$\text{TATO} = \frac{\text{Sales}}{\text{Total Assets}} \dots\dots(2.4)$$

**Profitability Ratio**

According to Brigham and Houston (2014: 107), "profitability is one indicator used to measure a

company's financial performance. The profitability ratio will show the combination of the effects of liquidity, asset management and debt on operating results ". This profitability ratio illustrates the company's success in generating profits. These ratios include: net profit margin, return on assets, return on equity, earnings per share. In this study profitability is proxied by Return On Assets (ROA).

According to Tandelilin (2010: 372) states that: "Return on assets illustrates the extent to which the ability of assets owned by the company can generate profits". Return on assets is measured as the ratio of profitability produced to total assets under management responsibility. Thus, return on assets reflects the impact of management decisions and actions along with the company's business environment over a certain period of time (Waqas and Mobeen, 2014). Mathematically return on assets can be formulated as follows (Brigham & Houston (2014: 148)):

$$\text{ROA} = \frac{\text{Net Income}}{\text{Total Assets}} \times 100\% \dots\dots(2.5)$$

*E. Relationship Between Research Variables*

Rising company stock prices are information for investors as a good signal and have an effect on stock prices. Thus a good signal or a bad signal affects the level of stock returns of a company. Relevant financial statements reveal all information deemed important to users of financial statements.

*F. Hypothesis Development*

**Effect of Current Ratio on Stock Returns**

Current ratio (CR) is a liquidity ratio that is used as a measurement tool to determine a company's ability to meet its short-term obligations (Syamsuddin, 2011: 65). If the company's current ratio (CR) is getting bigger, the company's ability to pay short-term liabilities will be even greater (Harahap, 2009: 301).

Companies that have a high value in Current Ratio have a positive impact on companies and investors. These positive effects include investor interest in buying shares, and demand for company shares increases with an increase in stock demand, making stock prices rise and causing a positive impact on stock returns, namely an increase in stock returns for companies and investors. Conversely, if the Current Ratio shows the ability of low current assets to pay debts, it will have a negative impact on companies and investors. Based on the description above, it can be obtained by the hypothesis, namely:

H1 = Current Ratio has a positive and significant effect on stock returns

### Debt Equity Ratio Against Stock Return

Debt to Equity Ratio (DER) is a comparison between debt and equity. DER provides guarantees about how much the company's debt is guaranteed by the company's own capital used as a source of business funding (Ang, 1997). The high level of Debt to Equity Ratio (DER) shows the composition of total debt (short-term debt and long-term debt) is greater when compared to total own capital, so this will have an impact on the greater burden of the company on external parties (creditors). The greater the DER value indicates that the business capital structure uses more debt relative to equity. Based on the description above, we can obtain a hypothesis that is:

H2 = Debt equity ratio has a negative and significant effect on stock returns

### The Effect of Total Asset Turnover on Stock Returns

According to Sartono (2010: 120), "Total Assets Turnover is to show how effective the company is in using all assets to create sales and make profits". And according to Syamsuddin (2011: 73), "Total Assets Turnover is to measure how many times the total assets of the company generate sales, this can also be interpreted as Total Assets Turnover measures the turnover of all assets owned by the company and measures how many sales earned from each asset rupiah". Based on the description above, we can obtain a hypothesis that is:

H3 = Total Asset Turnover has a positive and significant effect on stock returns

### Effects of Return on Assets on Stock Returns

Tandellin (2010: 386) states that: "Return on assets (ROA) measures the level of accounting return on total company assets". Robert Ang (1997: 18) states that: "The greater the ROA shows the better performance, because the greater the rate of return".

According to Jogiyanto (2014: 392), information published as an announcement will give investors a signal in making investment decisions. If the announcement contains a positive value, then the market is expected to react when the announcement is received by the market. When the information is announced and all market participants have received the information, market participants first interpret and analyze the information as good news or bad news. If the announcement of this information is a good signal for investors, there will be a change in the trading volume of shares. One type of information released by a company that can be a signal to parties outside the company, especially for investors, is an annual report. Based on the description above, it can be obtained by the hypothesis namely:

H4 = Return on Assets has a positive effect on stock returns

## III. RESEARCH METHODS

This type of research is a comparative study that is the type of research that leads to differences in variables in an aspect studied. This research was conducted to find out how the influence of independent variables namely the current ratio (CR), debt to equity ratio (DER), total asset turnover (TATO) and return on assets (ROA) on the dependent variable, namely stock returns. Based on the type of data, this research uses a quantitative approach that is research in the form of numerical data. The financial data needed for research is obtained from the financial statements for the period 2013-2017.

The population in this study are coal mining companies listed on the Indonesia Stock Exchange (IDX) for the 2013-2017 period. In this study using a purposive sampling method. The type of data used in this study is secondary data. The subjects of this study were coal mining companies listed on the Indonesia Stock Exchange (IDX) for the period 2013 - 2017.

Data analysis techniques used in this study used quantitative analysis with statistical calculation techniques. Data analysis techniques include descriptive statistics, classic assumption tests which include heteroscedasticity, autocorrelation, and multicollinearity which aim to check the accuracy of the model so that it is not biased and efficient, model testing, panel data regression analysis, and hypothesis testing. Analysis of the data obtained in this study will use a statistical data processing program known as Software Eviews Version 11. The method used is as follows: (1). Descriptive statistics, (2). Test classic assumptions, (3). Heteroscedasticity test, (4). Multicollinearity Test, (5). Correlation Test.

## IV. RESEARCH RESULTS AND DISCUSSION

Based on the listed companies listed on the IDX there are 23 coal mining companies, but the sample selected in this study is only 19 companies. Below is a list of coal mining companies during the 2013-2017 period that are the research samples, as follows:

Table 4.1. List of Coal Mining Companies  
Period 2013-2017.

No	Kode Saham	Nama Emiten
1	ADRO	Adaro Energy Tbk
2	ARII	Atlas Resources Tbk
3	ATPK	Bara Jaya Internasional Tbk
4	BORN	Borneo Lumbung Energi & Metal Tbk
5	BSSR	Baramulti Suksesarana Tbk
6	BUMI	Bumi Resources Tbk
7	BYAN	Bayan Resources Tbk
8	DEWA	Darma Henwa Tbk
9	DOID	Delta Dunia Makmur Tbk
10	GEMS	Golden Energy Mines Tbk

12	GTBO	Garda Tujuh Buana Tbk
12	HRUM	Harum Energy Tbk
13	ITMG	Indo Tambangraya Megah Tbk
14	KKGI	Resource Alam Indonesia Tbk
15	MYOH	Myoh Technology Tbk
16	PTBA	Tambang Batubara Bukit Asam (Persero)Tbk
17	PTRO	Petrosea Tbk
18	SMMT	Golden Eagle Energy Tbk
19	TOBA	Toha Bara Sejahtera Tbk

Source: www.sahamok.com (2019)

A. Descriptive Statistics

Descriptive statistics describe a data that is seen from the mean, standard deviation, minimum variance, maximum, sum, kurtosis and skewness of each variable. Variables used include stock return, current ratio, debt to equity ratio, total asset turnover and return on assets. From the data of one dependent variable and four independent variables, a descriptive statistical test is tested, then the results are obtained according to the following table:

Table 4.2. Descriptive Statistics Results

	RS	CR	DER	TATO	ROA
Mean	0.194124	6.409051	0.847069	0.697448	0.028109
Median	-0.042056	1.563976	0.670395	0.670963	0.034123
Maximum	8.444444	443.0000	14.81267	1.868178	0.394080
Minimum	-0.904202	0.062528	-24.11830	0.000000	-0.643872
Std. Dev.	1.196498	45.29028	3.916450	0.510725	0.138123
Skewness	4.237054	9.578980	-2.083010	0.357262	-1.639276
Kurtosis	26.77182	92.84267	21.45678	2.176215	10.04709
Jarque-Bera	2521.101	33403.32	1417.117	4.707118	239.1244
Probability	0.000000	0.000000	0.000000	0.095030	0.000000
Sum	18.44176	608.8598	80.47152	66.25755	2.670332
Sum Sq. Dev.	134.5711	192813.7	1441.827	24.51891	1.793337
Observations	95	95	95	95	95

Sumber: data diolah dengan Eviews 11

B. Classic Assumption Test

In accordance with the purpose of the research to be carried out, namely to find out how the effect of profitability, liquidity, asset structure, and company size on capital structure, then before data analysis and hypothesis testing are tested, the assumptions in the regression analysis will be carried out first, namely testing classic assumptions which include:

**HETEROSCEDASTICITY TEST**

This heteroscedasticity test is performed using the White Test. In the White test if the value of the Likelihood ratio obtained exceeds the probability value at the chosen significance level, then the conclusion is there is heteroscedasticity, and vice versa. The testing procedure is carried out with the following hypotheses and table 4.3 :

H0: There is no heteroscedasticity

H1: There is Heteroskedasticity

Table 4.3. Heterokedasticity Test  
Heteroscedasticity Based On Panel Cross-Sections

Panel Cross-section Heteroskedasticity LR Test  
Equation: PANEL\_ORI  
Specification: RS C CR DER TATO ROA  
Null hypothesis: Residuals are homoskedastic

	Value	Df	Probability
Likelihood ratio	423.0845	19	0.0000

LR test summary:

	Value	Df
Restricted LogL	-148.8852	90
Unrestricted LogL	62.65706	90

Source: data processed with Eviews 11

Probability Likelihood ratio 0.0000 <0.05 The results of the Panel Cross-section Heteroskedasticity LR Test results in heteroscedasticity. When heteroscedasticity is detected, healing the symptom directly is done using the White cross-section menu available in the Eviews application.

Table 4. 3. Heteroskidasticity Period Test

Panel Period Heteroskedasticity LR Test  
Null hypothesis: Residuals are homoskedastic  
Equation: UNTITLED  
Specification: DER C ROE CR SA LN

	Value	df	Probability
Likelihood ratio	2.948951	21	1.0000

LR test summary:

	Value	df
Restricted LogL	-6.388665	100
Unrestricted LogL	-4.914190	100

Source: Output Eviews

**Heteroscedasticity Based On Panel Period**

Panel Period Heteroskedasticity LR Test  
Equation: PANEL\_ORI  
Specification: RS C CR DER TATO ROA  
Null hypothesis: Residuals are homoskedastic

	Value	Df	Probability
Likelihood ratio	122.3912	19	0.0000

LR test summary:

	Value	Df
Restricted LogL	-148.8852	90
Unrestricted LogL	-87.68963	90

Source: data processed with Eviews 11

Table 4.3. above that the results of heteroscedasticity output by panel cross section and panel period show the probability value is 0,000. Because the p value is 0,000 <0.05 then Ho is rejected or that means the regression model is heteroscedasticity.

**MULTICOLLINEARITY TEST**

In this study, the test used for the Multicollinearity Test is by conducting a Correlation Matrix Test. In the Correlation Matrix Test, if the number of correlations between independent variables is less than 0.8 then there is no multicollinearity problem. Below this multicollinearity test can be seen in table 4.5.

Table 4.4. Multicollinearity Tests

	CR	DER	TATO	ROA
CR	1.000000	-0.197365	-0.089992	-0.013648
DER	-0.197365	1.000000	0.016365	0.051210
TATO	-0.089992	0.016365	1.000000	0.612460
ROA	-0.013648	0.051210	0.612460	1.000000

Sumber : data diolah dengan Eviews 11

Based on table 4.4. above the results of the correlation matrix output are as follows:

1. CR-DER:  $r (-0,1974) < (0,8)$ , meaning there is no multicollinearity problem;
2. CR-TATO:  $r (-0.0899) < (0,8)$ , meaning there is no multicollinearity problem
3. CR-ROA:  $r (-0,0136) < (0,8)$ , meaning there is no multicollinearity problem.

Judging from the correlation value of the independent variables CR, DER, TATO and ROA have a correlation value lower than 80%, it can be concluded that CR, DER, TATO and ROA do not have multicollinearity.

**CORRELATION TEST**

**Autocorrelation Test**

To find out whether there is autocorrelation, you can use the Durbin-Watson test with Eviews 11, see table 4.5.

Table 4.5. Autocorrelation Test

Weighted Statistics			
Root MSE	1.101030	R-squared	0.235963
Mean dependent var	0.170434	Adjusted R-squared	0.202006
S.D. dependent var	1.259664	S.E. of regression	1.131201
Sum squared resid	115.1653	F-statistic	6.948842
Durbin-Watson stat	2.389573	Prob(F-statistic)	0.000064

From table 4.5. above shows the Durbin-Watson stat value of 2.33895 and dU value of 1.7546 and dL value of 1.579, then  $4 - dU (2.2454) < DW (2.33895) < 4 - dL (2,421)$  means that it is not there is a negative correlation or no decision.

**Cross Correlation Test**

Table 4.6. Cross Correlation Test

Residual Cross-Section Dependence Test  
 Null hypothesis: No cross-section dependence (correlation) in residuals  
 Equation: PANEL\_ORI  
 Periods included: 5  
 Cross-sections included: 19  
 Total panel observations: 95  
 Note: non-zero cross-section means detected in data  
 Cross-section means were removed during computation of correlations

Test	Statistic	d.f.	Prob.
Breusch-Pagan LM	329.4328	171	0.0000
Pesaran scaled LM	8.567064		0.0000
Pesaran CD	6.368047		0.0000

**C. Panel Data Regression Model**

This study uses a regression model estimation method using panel data. Can be done through three approaches, including: (1) Common Effect Model (CEM), (2) Fixed Effect Model (FEM), and (3) Random Effect Model (REM).

Before testing the Chow Test, whether to choose to use Common Effects or Fixed Effects, the following is presented in Table 4.7. Summary of the linear regression results of the panel estimation model data with Common Effects and Fixed Effects.

The Chow Test is the first data selection technique model selection test conducted to test whether it is better to use Common Effects or Fixed Effects. The hypothesis proposed in the Chow test is:

- $H_0$  = a more appropriate model is the Common Effects model
- $H_1$  = a more appropriate model is the Fixed Effects model

With a total of 95 observations (19 companies in 5 years). The following table 4.7. Chow test results from panel data regression that researchers conducted.

Table 4.7. Chow Test Results

Redundant Fixed Effects Tests			
Equation: PANEL_REM			
Test cross-section fixed effects			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	0.872059	(18,72)	0.6122

Source: data processed with Eviews 11

Based on the Chow test results above it can be seen that the value of Prob. Cross Section F is 0.6112 which means the alpha value is more than 0.05. This shows that  $H_0$  is accepted or the common effect model is better than the fixed effect model. The second test is followed by the Lagrange Multiplier test.

Table 4.8. Lagrange Multiplier Test

	Cross section
Breusch-Pagan	2.188268
	(0.1391)

Source: data processed with Eviews 11



Based on the test results above, the P-Breusch-Pagan Value is 0.1391 where the value is more than 0.05. So that the LM Test shows that a more appropriate estimation method uses the common effect model. From the two tests above, the appropriate panel data analysis method to be used is the common effect model.

**D. Panel Data Regression Analysis**

The stage in this research is to do a statistical test with a 95% confidence level to test the hypotheses that have been made. Here are the outputs from panel data regression with estimates using the Common Effect.

Table 4.9 Summary of Test Results of Regression Data for Estimated Stock Return Panels

With Common Effects

Dependent Variable: RS  
 Method: Panel EGLS (Cross-section weights)  
 Date: 09/23/19 Time: 19:31  
 Sample: 2013 2017  
 Periods included: 5  
 Cross-sections included: 19  
 Total panel (balanced) observations: 95  
 Linear estimation after one-step weighting matrix  
 White period standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.135295	0.077900	1.736785	0.0858
CR	-0.001340	0.000268	-4.998785	0.0000
DER	0.026175	0.012737	2.055099	0.0428
TATO	-0.180889	0.091923	-1.967828	0.0522
ROA	1.523531	0.369476	4.123496	0.0001

  

Weighted Statistics			
Root MSE	1.101030	R-squared	0.235963
Mean dependent var	0.170434	Adjusted R-squared	0.202006
S.D. dependent var	1.259664	S.E. of regression	1.131201
Sum squared resid	115.1653	F-statistic	6.948842
Durbin-Watson stat	2.389573	Prob(F-statistic)	0.000064

  

Unweighted Statistics			
R-squared	0.033542	Mean dependent var	0.194124
Sum squared resid	130.0573	Durbin-Watson stat	2.682041

Source: Data processed with Eviews 11

Based on table 4.9. it can be seen that the coefficient column of the multiple regression equation is as follows:

$$\text{Stock Return} = 0.135295 - 0.01340\text{Crit} + 0.026175 \text{ SERIES} - 0.180889 \text{ TATOit} + 1.523531\text{ROAit} + \epsilon\text{it}$$

1. The significance test interpretation can be explained as follows:  
 Significance value for CR is 0.0000 less than  $\alpha = 0.05$  or  $0.0000 < 0.05$ , then H1 is accepted and CR has a significant negative effect on hospitals in coal mining companies on the Stock Exchange.
2. DER probability value of 0.0428 is smaller than  $\alpha = 0.05$  or  $0.0428 < 0.05$ , then H1 is

accepted and DER has a significant positive effect on hospitals in coal mining companies on the Stock Exchange.

3. TATO probability value of 0.0522 is greater than  $\alpha = 0.05$  or  $0.0522 > 0.05$  then H0 is accepted then TATO has no significant negative effect on hospitals in coal mining companies on the Stock Exchange.
4. ROA probability value of 0.0001 is smaller than  $\alpha = 0.05$  or  $0.0001 < 0.05$ , then H1 is accepted and ROA has a significant positive effect on hospitals in coal mining companies on the Stock Exchange

**E. Discussion**

**Effect of Current Ratio to Stock Return**

From the significance test results obtained by CR there is a significant negative effect on stock returns or the hypothesis is rejected. The results of this study are not in accordance with Harahap's theory (2009: 301). If the company's current ratio (CR) is getting bigger, the company's ability to pay short-term liabilities will be even greater.

The results of this study indicate that the company has a lot of funds / cash that are unemployed which in turn can reduce the company's profit ability. As a result, stock prices on the capital market will fall and stock returns to be received by investors will also decline.

The results of this study are consistent with the results of research conducted by previous researchers such as: Antara et all (2014) where CR has a significant negative effect on stock returns. And by Oktavia and Norita (2016) concluded that the current ratio (CR) has a significant influence with a negative direction on the company's stock return.

**Effect of Debt to Equity Ratio on Stock Return**

From the significance test results obtained debt equity ratio there is a significant positive effect on stock returns or hypothesis rejected. The results of this study are not in accordance with the theory put forward by According to Brigham and Houston (2014: 103) companies with low debt to equity will have a small risk of loss when the economic situation deteriorates, but when economic conditions improve, the opportunity to earn profits is also low . Conversely companies with high debt to equity ratios indeed bear the risk of large losses as well when the economy is declining, but in good condition, this company has the opportunity to make large profits. Companies with high profits will be able to pay higher dividends, so it is related to earnings per share that will rise due to higher debt levels, so leverage will be able to raise share prices (Brigham and Houston, 2014: 24).

The results of the analysis show a positive effect between DER on return means that increasing DER will increase return and vice versa. The results of this

analysis indicate that the company certainly needs additional capital to increase its business, so that additional funds are met from third parties because internal funds are insufficient. As a form of responsibility for the amount of debt makes the company set a target to obtain greater profits, with these conditions the company will develop in the future.

The results of this study are consistent with the results of research conducted by Safitri and Indriyani (2017) and Nalurita (2015) that DER has a positive effect on stock returns.

#### **Effect of Activity Ratio on Stock Return**

From the significance test results obtained total asset turnover there is no significant negative effect on stock returns or the hypothesis is rejected. The results of this study are not in accordance with the theory put forward by Fahmi (2012: 80) that the activity ratio represented by total asset turn over (TATO) is an activity ratio that shows how the effectiveness of the company uses the overall assets to create sales and make a profit.

The results of this study indicate that the high TATO of the companies sampled is accompanied by a decrease in the company's stock returns. The company's ability to optimize its assets effectively and efficiently does not affect the investor's interest in buying the company's shares, this can happen because some companies that are able to get high TATO in the same period are not followed by profits which make investors not interested in buying shares in the company. Causing the company's stock price to decline which results in a decrease in stock returns.

The TATO ratio has no significant effect with a significance level of 5%. But the TATO ratio will have a significant effect with a significance level of 10%. The results of this study are consistent with the results of research conducted by Ulupui (2010) where TATO has no significant negative effect on stock returns.

#### **Effect of Profitability Ratios on Stock Returns**

From the significance test results obtained return on assets there is a significant positive effect on stock returns or accepted hypotheses. The results of this study are in accordance with Munawir's theory (2010: 70), "profitability ratios are ratios that indicate the ability of companies to make profits". For shareholders, this ratio shows their level of income in investing.

The results of this study indicate that high ROA shows that the company is able to generate high profits, so investors will be more interested in owning company shares that produce profits. With high stock prices, it will increase stock returns for investors.

The results of this study are consistent with the results of research conducted by Anwaar (2016), Safitri and Indriyani (2017), Scrimgeour (2014),

Denziana et al (2015), Tyas et al (2018), Ulupui (2010), Oktavia and Norita (2010) (2016), Kurniawan et al (2018), Stefano (2015) where ROA affects stock returns.

#### **Determination Coefficient Test (R2)**

R2 shows the percentage variation in the value of the dependent variable that is explained by the resulting regression equation. In Table 4.9 it is known that the R2 value of the research model that uses the common effect model has a value of 0.2359. This shows that the contribution of liquidity variables (X1), leverage (X2), activity (X3) and profitability (X4) simultaneously have a significant effect on stock returns (Y) of 23.59% at the level of significant 5%. While the remaining 76.41% is explained by other variables outside this research model.

## **V. CONCLUSIONS AND SUGGESTIONS**

### *A. Conclusions*

Based on the research that has been done, the following conclusions can be drawn:

1. The CR variable has a significant negative effect on stock returns or the hypothesis is rejected. The results of this study are not in accordance with Harahap's theory (2009: 301). If the company's current ratio (CR) is getting bigger, the company's ability to pay short-term liabilities will be even greater.
2. The debt equity ratio variable has a significant positive effect on stock returns or the hypothesis is rejected. The results of this study are not in accordance with the theory put forward by According to Brigham and Houston (2014: 103) companies with low debt to equity will have a small risk of loss when the economic situation deteriorates, but when economic conditions improve, the opportunity to earn profits is also low. Conversely companies with high debt to equity ratios indeed bear the risk of large losses as well when the economy is declining, but in good condition, this company has the opportunity to make large profits. Companies with high profits will be able to pay higher dividends, so it is related to earnings per share that will rise due to higher debt levels, so leverage will be able to raise share prices (Brigham and Houston, 2014: 24).
3. The total asset turnover variable has no significant negative effect on stock returns or the hypothesis is rejected. The results of

this study are not in accordance with the theory put forward by Fahmi (2012: 80) that the activity ratio represented by total asset turn over (TATO) is an activity ratio that shows how the effectiveness of the company uses the overall assets to create sales and make a profit.

4. The return on asset (ROA) variable has a significant effect on stock returns or the hypothesis is accepted. The results of this study indicate that high ROA shows that the company is able to generate high profits, so investors will be more interested in owning company shares that produce profits. With high stock prices, it will increase stock returns for investors.

### *B. Suggestion*

Based on the conclusions above, the researcher will give the following suggestions:

1. For Investors  
Investors who wish to invest in the capital market should pay attention to the effects of variables such as CR, DER, TATO, and ROA used in this study before investing funds in companies that are sampled in the study.
2. For companies that have been listed on the IDX  
It is better to better regulate the ratio of its activities to the company so that asset turnover can provide profits so that it will increase the company's stock return and attract investors to buy company shares.
3. For Academics  
The next researcher is expected to increase the number of company samples and the time period of the study as well as add to other financial ratio factors besides CR, DER, TATO, and ROA to get more accurate results.

### **Limitations of Research and Further Research Development**

This research is only limited to the company's stock returns per year during the 2012-2017 period so that it does not adequately describe the company's financial condition, the researcher suggests to the next researcher to use stock returns per month

because it better describes the company's financial condition in real terms.

The researcher realizes that this research is still far from perfection, therefore further researchers are advised to add variables related to factors that affect stock returns such as company external factors consisting of inflation, interest rates, money supply, GDP, etc., and internal factors consist from financial ratios (other than CR, DER, TATO and ROA) so that they can provide more accurate and better research results. This research was only carried out on one subsector namely coal mining so the results of this study have not given general results.

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