

# Empirical Study of Financial Ratios: Predicting Profit Changes in Coal Mining Companies in Indonesia

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**Abstract:-** The purpose of this study is to analysis the factors that affect the change in profits at coal mining companies listed on the Indonesia Stock Exchange. The method used is multiple regression analysis. The study's findings prove simultaneously the factors tested had no effect on profit change. However, partially return on assets has a significant effect on earnings changes, while other ratios do not show the same thing.

**Keywords:-** *Liquidity Ratio, Activity Ratio, Profitability Ratio, Market Value Ratio, Profit Change.*

## I. INTRODUCTION

No business entity can be separated from the need for information. One of the information needed is accounting information in the form of financial statements. One of the information that can be obtained from financial statements is profit. Moreover, the wider community essentially measures the success of a company in accordance with its capacity in terms of management performance. Profit is a reduction in debt resulting in an increase in economic benefits during the accounting period in the form of additional income or assets, or an increase in capital that is not due to an investment contribution. An income statement is a systematic description of a company's profits, expenses, and gains and losses over a period of time. Profit can explain the company's performance over a period in the past. The profit obtained by the company for the coming year cannot be ascertained, it is necessary to have a prediction of changes in profit, where profit is an indicator to determine the company's financial performance, whether it has increased or decreased. Changes in earnings will affect financial policies for further activities, such as investment policies, and especially to maintain the continuity of the company's activities.

The mining sector in the world is one of the pillars of a country's national economic development, according to the Central Statistics Agency (BPS) mining is a sector that contributes to Gross Domestic Product (GDP) which grew positively [1]. Based on the table below, it can be seen that data regarding net income (profit after tax) at coal mining companies listed on the IDX during the 2017-2019 period are as follows.

Table 1 Net Income (profit after tax) of coal mining companies registered with IDX for the period 2017-2019

Company Code	Net profit		
	2017 (IDR)	2018 (IDR)	2019 (IDR)
ADRO	536.438.00	477.541.000	435.002.000
BSSR	82.816.929	69.063.191	30.467.457
BUMI	242.746.18	158.218.349	9.470.482
BYAN	338.017.19	524.309.273	234.211.277
DEWA	2.769.140	2.565.336	3.773.979
DSSA	128.237.36	120.745.047	71.654.412
GEMS	120.106.04	100.548.578	66.765.857
HRUM	55.748.001	40.205.422	20.122.589
INDY	321.633.15	97.862.189	4.922.434
KKGI	13.439.975	475.600	5.414.352
MBAP	58.635.700	50.310.702	35.287.557
MYOH	12.306.356	30.928.664	26.098.429
PTBA	4.547.232	5.121.112	4.040.394
PTRO	8.311.000	23.166.000	31.324.000
SMMT	40.078.001	84.584.567.6	6.234.017.11
TOBA	41.369.891	68.089.796	43.745.700

Source: www.idx.co.id, data processed 2021

Based on table 1, it can be seen that the profit data of coal mining companies listed on the IDX for the 2017-2019 period has increased and some have also decreased. Such as PT Adaro Energy Tbk, PT Baramulti Suksessarana Tbk, PT Bumi Resources Tbk, PT Dian Swastika Sentosa Tbk, PT Golden Energy Mines Tbk, PT Harum Energy Tbk, PT Indika Energy Tbk, PT Resources Alam Indonesia Tbk, PT Mitrabara Adiperdana Tbk. which decreased during the 2017-2019 period. And the companies PT Darma Henwa Tbk, PT Samindo Resources Tbk, PT Petrosea Tbk which experienced an increase during the 2017-2019 period and the companies PT Bayan Resources Tbk, PT Bukit Asam Tbk, PT Golden Eagle Energy Tbk, PT TBS Energy Utama Tbk which experienced an increase and also, a decrease during the 2017-2019 period. From this data, it can be obtained data on changes in profits for coal mining companies listed on the IDX for the 2017-2019 period.

Table 2 Data on changes in the profit of coal mining companies listed on the IDX for the period 2017-2019

NO	Company Code	Profit Change (%)		
		2017	2018	2019
1	ADRO	0,57	-0,11	-0,09
2	BSSR	2,02	-0,17	-0,56
3	BUMI	1,02	-0,35	-0,94
4	BYAN	17,7	0,55	-0,55
5	DEWA	4,04	-0,07	0,47
6	DSSA	0,96	-0,05	-0,41
7	GEMS	2,43	-0,16	-0,34
8	HRUM	2,10	-0,28	-0,50
9	INDY	-	-0,70	-0,19
10	KKGI	0,42	-0,96	10,38
11	MBAP	1,16	-0,14	-0,30
12	MYOH	-	1,51	-0,16
13	PTBA	1,25	0,13	-0,21
14	PTRO	-2,06	1,79	0,35
15	SMMT	-10,53	1,11	-0,93
16	TOBA	1,84	0,65	-0,36

Source: www.idx.co.id, data processed 2021

Based on table 2, it can be seen that the data on changes in the profits of coal mining companies listed on the IDX for the 2017-2019 period has increased and some have also decreased. Such as PT Adaro Energy Tbk, PT Baramulti Suksessarana, PT Bumi Resources Tbk, PT Byan Resources Tbk, PT Dian Swastika Sentosa Tbk, PT Golden Energy Mines Tbk, PT Harum Energy Tbk, PT Mitrabara Adiperdana Tbk, PT Bukit Asam Tbk, PT Toba Bara Sejahtera Tbk which experienced a decline during the 2017-2019 period. And for the companies PT Darma Henwa Tbk, PT Resources Alam Indonesia Tbk, PT Samindo Resources Tbk, PT Petrosea Tbk, PT Golden Eagle Energy Tbk which have increased and decreased during the 2017-2019 period. The minus sign (-) means that there is a decrease in profit but no loss. Because the calculation of the change in profit is the current year's profit minus the previous year's profit divided by the previous year's profit. So, if the profit earned in the current year is smaller than the previous year, the change in profit will decrease and vice versa if the profit earned in the current year is greater than the profit earned in the previous year, the change in profit will increase. Even though there are companies that experience a decline, it does not affect the change in profit, because changes in profit do not always increase but will also decrease in each period.

This phenomenon is based on data on changes in profits for coal mining companies listed on the Indonesia Stock Exchange which increased and decreased in the 2017-2019 period, and also on net profit data on coal mining companies listed on the Indonesia Stock Exchange which increased and also decline in the 2017-2019 period. In

addition, it is based on previous studies that there are inconsistencies in the results of the research.

[Aprilia and Andayani \[2\]](#) Shows that there is *Current Ratio (CR)*, *Quick Ratio (QR)*, *Debt To Total Asset (DTAR)*, *Net Profit Margin (NPM)*, *Return on Equity (ROE)* used in predicting changes in profits. [Gustina and Wijayanto \[3\]](#) prove that Current Ratio (CR) and Debt Ratio (DR) have a positive effect on changes in profits and Total Asset Turnover (TATO) and Return on Assets (ROA) have no effect on changes in earnings. [Vera \[4\]](#) shows that the Current Ratio (CR), Return on Investment (ROI), Price Earning Ratio (PER) has a positive effect on profit changes while the Debt to Equity Ratio (DTER), Total Asset Turnover (TAT) has no effect on profit change. [Jane A Penman \[5\]](#) shows that Operating Profit Margin (OPM) Return On Equity (ROE) and Return On Assets (ROA) have a significant effect on profit changes. [Islami and Rio \[6\]](#) shows that Inventory Turnover (IT) has an effect on profit changes, while Total Assets Turnover (TAT) and Net Profit Margin (NPM) have no effect on profit changes.

This study is intended to carry out further testing of empirical findings regarding financial ratios, especially regarding their usefulness in predicting future earnings. The reason for choosing accounting profit is because profit reflects the company's performance, from the size of the profit it can be seen whether the company has a good performance or not. If financial ratios can be used as a predictor of future earnings changes, this finding is quite useful knowledge for users of financial statements who are in real terms, or have potential interest in a company. On the

other hand, if the ratio is not significant enough to predict future earnings changes, the results of this study will strengthen the evidence regarding the inconsistency of previous empirical findings. This research is different from previous research because the variables used are different. The independent variables used in this study are Current Ratio (CR), Inventory Turnover Ratio (ITR), Operating Profit Margin (OPM), Price Earnings Ratio (PER) and Return On Assets (ROA).

**II. RESEARCH FRAMEWORK**

Profit is one indicator of a company's performance. To generate profits, companies must carry out operational activities. The relationship between resources that make up these activities can be shown by financial ratios. Conditions of liquidity, activity, profitability of market value affect changes in profits to be achieved by a company. Profitability ratios are used to measure the overall operational effectiveness of the company. A high profitability ratio indicates a good company's operational activities.

The market value ratio relates the company's stock price to earnings and book value per share. If the ratio of liquidity, asset management, debt management, and profitability is good, then the market value ratio will be high. A high market value ratio indicates the company's high growth prospects. Based on this understanding, this research framework can be described as follows.

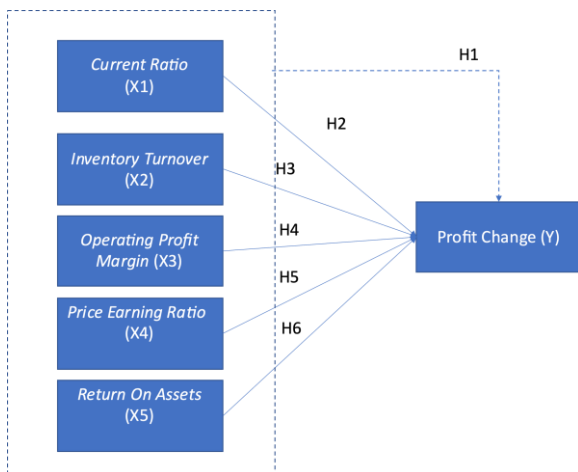


Fig 1. Research Framework

**III. HYPOTHESIS**

Based on the research framework model that has been made, the hypotheses in this study are as follows.

- H1: *Current Ratio, Inventory Turnover, Operating Profit Margin, Price Earnings Ratio, Return On Assets* simultaneously positively effects on profit changes.
- H2: *Current Ratio (CR)* positively effects on profit changes.

- H3: *Inventory Turnover (IT)* positively effects on profit changes
- H4: *Operating Profit Margin (OPM)* positively effects on profit changes
- H5: *Price Earnings Ratio (PER)* positively effects on profit changes.
- H6: *Return On Assets (ROA)* positively effects on profit changes.

**IV. METHOD**

This study using secondary data from the financial statements of 24 coal mining subsector companies listed on the Indonesia Stock Exchange (IDX) in 2017-2019 with purposive sampling methods. The independent variables of this study is financial change ratios (CR, IT, OPM, PER, ROA). Financial changes ratio is the difference between financial ratio a given year and the previous year divided by the previous year. Data analysis techniques using multiple regression analysis, such analysis from requiring researchers to meet the underlying some assumptions. For that first conducted a classic assumption test, and has met its requirements. The test aims to find out if there is an effect of profit changes with *current ratio (CR), Inventory Turnover Ratio (ITR), Operating Profit Margin (OPM), Price Earnings Ratio (PER) Return. On Assets (ROAs)* which are independent variables to changes in profits that are dependent variables. Multiple linear regression equations are as follows:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + e$$

Description:

- Y : change in profit
- A : Constant
- B : independent variable regression coefficient
- X<sub>1</sub> : Current Ratio (CR)
- X<sub>2</sub> : Inventory Turnover Ratio (ITO)
- X<sub>3</sub> : Operating Profit Margin (OPM)
- X<sub>4</sub> : Price Earnings Ratio (PER)
- X<sub>5</sub> : Return On Assets (ROA)
- E : recidual

**V. RESULT AND DISCUSSION**

This study tests the liquidity are represented by the *Current Ratio (CR)*, activities represented by *Inventory Turnover (IT)*, profitability represented by *Operating Profit. Margin (OPM)* and *Return On Assets (ROA)*, the market value represented by the *Price Earnings Ratio (PER)* while the dependent variable in the study was the change in profit.

**Results**

Based on the descriptive statistical in the table 3 shows that: Current Ratio (CR) with a study sample of 48. The lowest value is 0.21 and the highest value is 9.22. The current ratio's average value of 1.9645 means that the current ratio sample is normal because the average value is higher than the standard deviation value. *Inventory Turnover*

(ITO) with a research sample of 48. The lowest value is -402.11 and the highest value is 188.24. The average *Inventory Turnover* value of 5.6456, means that the *Inventory Turnover* sample is less normal because the average value is lower than the standard deviation value. *Operating Profit Margin* (OPM) with a research sample of 48. The lowest value is -0.02 and the highest value is 17.83. The average *Operating Profit Margin* value of 0.6034, means that the *operating profit margin* sample is less normal because the average value is lower than the standard value. deviation. *Price Earning Ratio* (OPM) with a research sample of 48. The lowest value is -14.93 and the highest value is 164.58. The average *price earning ratio* is 14.0906, meaning that the *price earning ratio* sample . It is less normal because the average value is lower than the standard deviation value. Return on Assets (ROA) with a sample of 48 studies.

The lowest value is 0.14 and the highest value is 45.56. The average Return On Assets value of 11.8821, means that the Return On Assets sample is normal because the average value is higher than the standard deviation value.

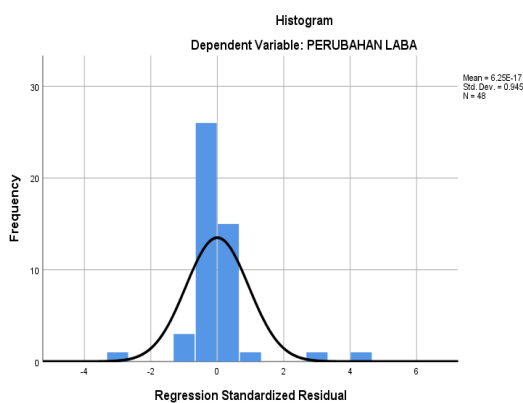
Change in Profit with a sample of 48 studies. The lowest value is -10.53 and the highest value is 17.76. The average value of the Change in Profit is 0.5445, it is meaning that the Profit Change is less normal because the average value is lower than the standard deviation value.

Table 3 Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
CR	48	.21	9.22	1.9645	1.55122
IT	48	-402.11	188.24	5.6456	71.84340
OPM	48	-.02	17.83	.6034	2.57700
PER	48	-14.93	164.58	14.0906	23.92484
ROA	48	.14	45.56	11.8821	11.26896
Perubahan Laba	48	-10.53	17.76	.5445	3.55571
Valid N (listwise)	48				

A. Data Normality Test

This test uses the normal Probability Plot test, histogram chart and Kolmogorov Smirnov test, the results of which appear in the following picture.



Picture 2 Normality Histogram

Based on figure 2 shows that residual distributed normally and symmetrically, does not deviate kekanan or to the left which means that the data is normal distribution and It can be seen in the normal graph on the probability plot it can be known that the point (data) spreads around the diagonal line and the spread slightly follows the direction of the diagonal line and The spread slightly follows the direction of the diagonal line, so it can be concluded that the regression model meets the normality assumption.

The next step is to test whether the data is distributed normally or not, the *Kolmogorov-Smirnov* test is conducted in table 4 as follows: Based on the Kolmogorov-Smirnov Test value is 0.142 and a significant amount of 0.200 greater than 0.05 which means the residual value is normally distributed or meets the classical assumption of normality.

B. The multicollinearity test

The multicollinearity test aims to test whether regression models found a correlation between independent variables. A good regression model should not have a correlation between independent variables.

Table 5 Collinearity Test

Coefficients <sup>a</sup>		
Collinearity Statistics		
Model		Tolera VIF
1	CR	.95 1.045
	IT	.95 1.047
	OPM	.97 1.024
	PER	.91 1.099
	ROA	.89 1.120

Table 5 shows that tolerance values above 0.10 and variance inflation factor (VIF) values indicate that no single free variable has a VIF value greater than 10. So it can be concluded that the results of this study are no symptoms of multicollinearity between free variables in the regression model.

C. Heteroskedasticity Test

The heteroskedasticity test aims to test whether in regression models there is variance inequality from residual one observation to another observation. If the variance from residual one observation to another observation remains, it is called homoscedasticity and if different is called heteroskedasticity. A good regression model is homoscedasticity or no heteroskedasticity. Heteroskedasticity can be detected by looking at the plot graph between the bound variable prediction value (ZPRED) and its residual (SRESID). Detection of the absence of heteroskedasticity can be done by seeing whether or not heteroskedasticity can be done by looking at the absence of certain patterns and scatterplot charts between SRESID and ZPRED where the Y axis is the predicted Y, the X axis is the residual (Y predics – real Y) that has been studentized.

Based on the Scatterplot test, the points spread in pickles and spread both above and below the number 0 on the Y axis. It can be concluded that there is no heteroskedasticity in regression models, so the regression model is worth using to predict changes in the profits of coal mining companies that are listed on the Indonesia Stock Exchange (IDX) based on the influence of various free Current Ratio, Inventory Turnover, Operating Profit Margin, Price Earnings Ratio, Return On Asset.

D. Autocorrelation Test

The autocorrelation test aims to test whether in a linear regression model there is a correlation between a nuisance error in the t period and a nuisance error in the (previous) t-1 period. If there is a correlation, then there is a problem of autocorrelation. A good regression model is a regression that is free of autocorrelation. There are several ways that can be used to detect the absence of autocorrelation, namely with the Durbin Watson test (DW test). Based on the results of

the run test known as Asymp. Sig. (2-tailed) of 0.884 greater > than 0.05, it can be concluded that there are no symptoms or an autocorrelation problem. Thus, the problem of autocorrelation that cannot be solved with durbins-watson can be resolved through the run test.

E. Regression Analysis

Table 8 ANOVA<sup>a</sup>

	Mode	Sum of	df	Mean	F	S
1	Regress	62.292	5	12.458	.984	.43
	Residua	531.931	42	12.665		
	Total	594.223	47			

a. Dependent Variable: Profit Change

b. Predictors: (Constant), ROA, OPM, CR, IT, PER

Multiple regression analysis is calculated using the help of the SPSS program. This calculation is done to determine the relative contribution of each independent variable in explaining its effect on dependent variables. Multiple linear regression results as follows:

Table 6 Multiple Regression

Coefficients <sup>a</sup>						
Model		B	Std. Error	Unstandardized Coefficients		
				Beta	T	Sig.
1	(Constant)	-.591	1.134		-.521	.605
	CR	-.018	.342	-.008	-.054	.958
	IT	.000	.007	.003	.021	.983
	OPM	.020	.204	.015	.099	.922
	PER	-.002	.023	-.017	-.110	.913
	ROA	.100	.049	.318	2.060	.046

Dependent Variable: Profit Change

Based on the results of the multiple regression analysis in table 6, the equation of multiple regression is mathematically as follows:

$$\text{Profit Change} = -0,591 + -0,018 (X_1) + 0,000 (X_2) + 0,020 (X_3) + -0,002 (X_4) + 0,100 (X_5) + e$$

This regression equation can be explained as follows:

- If assumed from variables X<sub>1</sub> (Current Ratio), X<sub>2</sub> (Inventory Turnover), X<sub>3</sub> (Operating Profit Margin), X<sub>4</sub> (Price Earning Ratio), X<sub>5</sub> (Return On Assets) is constant or equal to zero, then the varying value of Y Change in Profit is -0.591.
- The Current Ratio coefficient of -0.018 states that if the Current Ratio increases by one unit, then the change in profit will increase by -0.018 or -1.8%.
- The Inventory Turnover coefficient of 0.000 states that if Inventory Turnover increases by one unit, then the change in profit will increase by 0.000 or 0%.
- The Operating Profit Margin coefficient of 0.020 states that if the Operating Profit Margin increases by one unit, then the change in profit will increase by 0.020 or 2.0%.

- The *Price Earning Ratio* coefficient of -0.002 states that if the *Price Earning Ratio* increases by one unit, then the change in profit will increase by -0.002 or 0.2%.
- The *Return On Assets* coefficient of 0.100 states that if the *Return On Asset* increases by one unit, then the change in profit will increase by 0.100 or 100%.

I. Hypothesis Test

➤ F test

Table 8 shows the value of F 0.984 with a significance value level of 0.439. The value of such significance is greater than 0.05 so the hypothesis (H1) can be said that the *Current Ratio, Inventory Turnover, Operating Profit Margin, Price Earning Ratio, Return On Asset* simultaneously has no positive and insignificant effect on changes in profit. Based on table 9 shows the value of F 0.984 with a significance value level of 0.439. The value of such significance is greater than 0.05 so the hypothesis (H1) can be said that the *Current Ratio, Inventory Turnover, Operating Profit Margin, Price Earning Ratio, Return On Asset* simultaneously has no positive and insignificant effect on changes in profit.

➤ T test

Table 9 Coefficients<sup>a</sup>

The results of the t test are as follows:

- ❖ *Current Ratio* variable with value t -0.054 and signification rate of 0.958 greater than 0.05, so the second hypothesis (H2) can be said that the *Current Ratio* is partially it has no positive effect on profit changes.
- ❖ *Inventory Turnover* with a value of t 0.021 and a signification rate of 0.983 greater than 0.05, so the third hypothesis (H3) can be said that *Inventory Turnover* is partially not Positive effect on the change in profit.
- ❖ *Operating Profit Margin* with a value of t 0.099 and a signification rate of 0.922 is greater than 0.05, so the fourth hypothesis (H4) can be said that *operating profit margin* is partially It has no positive effect on the change in profit.
- ❖ *Price Earning Ratio* with a value of t -0.110 and a signification rate of 0.913 greater than 0.05 so that the fifth hypothesis (H5) can be said that the *Price Earning Ratio* is Partial does not have a positive effect on the change in profit.
- ❖ *The Return on Asset* variable with a value of t 2,060 and the signification rate of 0.046 is smaller than 0.05, so the sixth hypothesis (H6) can be said that *The Return On Asset* is in real terms. Partially positively affects the change in profit.
- ❖ *Operating Profit Margin* with a value of t 0.099 and a signification rate of 0.922 is greater than 0.05, so the fourth hypothesis (H4) can be said that *operating profit margin* is partially It has no positive effect on the change in profit.

The coefficient of determination (R<sup>2</sup>)

The coefficient of determination (R<sup>2</sup>) essentially measures how far the model's ability to explain the variable changes in profit. The coefficient of determination is between zero and one. Here are the results of the coefficient of determination (R<sup>2</sup>).

Model Summary <sup>b</sup>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.324 <sup>a</sup>	.105	-.002	3.55880

a. Predictors: (Constant), ROA, OPM, CR, IT, PER

b. Dependent Variable: Profit Change

Based on table above shows the adjusted R Square result is - 0.02. Because of the negative value, the value is considered 0. This means that the variables *Current Ratio, Inventory Turnover, Operating Profit Margin, Price Earning Ratio, Return On Assets* are completely unable to explain the variation of the variable change in profit.

DISCUSSION

Based on the results that have been obtained that the variables *Current Ratio, Inventory Turnover,*

Model	B	Std. Error	Beta	T	Sig.	
1	(Constant) 91	.34		-.521	.605	
	CR	-.018	.342	-.008	-.054	.958
	IT	.000	.007	.003	.021	.983
	OPM	.020	.204	.015	.099	.922
	PER	-.002	.023	-.017	-.110	.913
	ROA	.100	.049	.318	2.060	.046

*Operating Profit Margin, Price Earning Ratio, Return On Assets* simultaneously have no positive and significant effect. changes in the profits of coal mining companies listed on the Indonesia Stock Exchange. The influence of *Current Ratio, Inventory Turnover, Operating Profit Margin, Price Earning Ratio, Return On Assets* tested against changes in profit showed that the value of F amounted to 0.984 with a significant amount of 0.439 which means greater than 0.05. This shows that the variables *Current Ratio, Inventory Turnover, Operating Profit Margin, Price Earning Ratio, Return On Assets* simultaneously have no positive and significant effect. to the change in profit.

A. Effect of Current Ratio on Profit Change

*Current Ratio* (CR) is a ratio to measure a company's ability to pay short-term obligations or debts that are immediately maturing at the time of collection [7]. From the results of the ratio measurement, if the *Current Ratio* (CR) is low it can be said that the company lacks capital to pay debt and vice versa if the *Current Ratio* (CR) is high. It can be said that the company can afford to pay the debt. So it can be concluded that the

second hypothesis is rejected because the *Current Ratio* (CR) is low so it is said that companies lack capital to pay debts. The results of this study are in line with [Khan and Khokhar \[8\]](#) states that the *current ratio* has no statistically significant effect on changes in profit. And not in line with [Aprilia and Andayani \[2\]](#) states that the *Current Ratio* has an effect on changes in profit. And not in line with the research of [Ningsih and Sari \[7\]](#) states that the *Current Ratio* partially has a positive and significant effect on the change in profit.

#### B. Effect of Inventory Turnover on profit changes

The greater the *Inventory Turnover* (IT) ratio, the better, because it is considered that sales activities run quickly and vice versa the smaller the *Inventory Turnover* ratio is not good. Because it is assumed that sales activities do not run quickly. So it can be concluded that the third hypothesis is rejected. This is because a lower inventory turnover will indicate that less time is needed for the company to convert inventory into sales.

#### C. Effect of Operating Profit Margin on profit changes

If the percentage of *Operating Profit Margin* (OPM) is higher, then the company is considered to have a good *pure Profit*, as well as the opposite the lower the percentage of *Operating Profit Margin* (OPM). The company does not have a good *pure profit*. So it can be concluded that the fourth hypothesis is rejected. Because the percentage of *Operating Profit Margin* (OPM) is low, the company is considered not to have a good *pure profit*. Profitability ratio is a ratio that seeks to measure a company's ability to generate profits, either by using all existing assets or by using its own capital [Agiomirgianakis, Voulgaris \[9\]](#). Meanwhile according to [\[10\]](#) is what describes the company's ability to earn profits through all capabilities, and existing sources such as sales activities, cash, capital, number of employees, number of branches, and so on. It can be concluded that the profitability ratio is the ratio to assess the company's ability to increase profits.

A good (healthy) company has great profitability and tends to have reasonable financial statements so that the potential to get a good opinion will be greater than if profitability is low Petronela (2004: 48). *Operating Profit Margin* (OPM) is a measure of a company's ability to increase earnings before interest and taxes compared to sales achieved by companies.

The results of this study are not in line with the research of [Singapurwoko and El-Wahid \[11\]](#) stating that *Operating Profit Margin* (OPM) has a positive and significant effect on profit changes. This is because *Operating Profit Margin* (OPM) can describe the *pure profit* received on every sale made.

#### D. Effect of Price Earning Ratio on profit changes

The highly *price earning ratio* (PER) reflects that the company has relatively safe income. Similarly, the low *Price Earning Ratio* (PER) reflects

that the company does not have relatively safe income. So it can be concluded that the fifth hypothesis is rejected. The low *price earning ratio* (PER) reflects that the company does not have relatively safe income. This research is not in line with [Lipunga \[12\]](#) research which states the *Price Earning Ratio* (PER) has a statistically significant effect on changes in profit. *Price Earning Ratio* (PER) is one of the indicators used by investors every day to assess market value. *Price Earning Ratio* (PER) shows how much investors are willing to pay per unit of currency from reported profits and this is what makes the *Price Earning Ratio* (PER) is quite high. The high *Price Earning Ratio* (PER) reflects that the company has relatively safe income.

#### E. Effect of Return on Assets on profit changes

*Return on Asset* (ROA) is a company's financial ratio that relates to profitability to measure a company's ability to generate profitability or profitability at the level of income, assets and capital. certain shares [Martani and Khairurizka \[13\]](#) The result of the calculation of the company's *Return On Assets* (ROA), the greater the *Return On Asset* (ROA) of the company, the greater the position of the company and the better the position The company is in terms of asset use. Therefore for management or other parties, high rentability is more important than large profits. So it can be concluded that the sixth hypothesis is accepted. The results of this study in line with [Asraf and Desda \[14\]](#) stated that *Return On Asset* (ROA) has a significant effect on profit changes. And not in line with [Khan and Khokhar \[8\]](#) said that *Return On Assets* (ROA) partially had no negative and significant effect on the change in profit.

## VI. CONCLUSION

Based on the results of research and discussion that have been presented in the previous chapters, it can be concluded as follows:

- Based on simultaneous test (test F) between *Current Ratio*, *Inventory Turnover*, *Operating Profit Margin*, *Price Earning Ratio*, *Return On Assets* to changes in profit, obtained the results that *current ratio*, *Inventory Turnover*, *Operating Profit Margin*, *Price Earning Ratio*, *Return On Assets* have no significant effect on changes in the profits of coal mining companies listed on the Stock Exchange Indonesia (IDX).
- Based on the partial test (Test t) between *current ratio* to the change in profit, the result was obtained that the *current ratio* did not have a significant effect on the change in the profit of coal mining companies that listed on the Indonesia Stock Exchange (IDX).
- Based on the partial test (Test t) between *Inventory Turnover* to changes in profit, it was obtained that *Inventory Turnover* had no significant effect on changes in the profit of coal mining companies that listed on the Indonesia Stock Exchange (IDX)
- Based on the partial test (Test t) between *Operating Profit Margin* against the change in profit, obtained the result that *Operating Profit Margin* is not significant

effect on changes in the profit of coal mining companies listed on the Indonesia Stock Exchange (IDX)

- Based on the partial test (Test t) between the *Price Earning Ratio* to the change in profit, it was obtained that the *Price Earning Ratio* had no significant effect on the change in the profit of coal mining companies listed on the Indonesia Stock Exchange (IDX)
- Based on the partial test (Test t) between *Return On Assets* to changes in profit, it was obtained that *Return On Assets* had a significant effect on the change in profits of coal mining companies that listed on the Indonesia Stock Exchange (IDX)

## VII. SUGGESTION

From the results of the research that has been obtained, researchers provide some advice for the future, namely as follows:

- Company management should pay attention to the value of CR, IT, OPM, PER and ROA so as not to experience inconsistencies so that it has no effect in predicting changes in profits in the next one to three years.
- Company management should optimize management so that current assets are greater than current debt so that if at the time billed or maturing will be immediately repaid.
- Company management should increase the value of IT so that the better the company in managing its sales so that sales run fast.
- Company management should increase profits before interest and taxes compared to sales achieved by the company. Because if the OPM is getting higher then the company is considered to have a good profit as well.
- Company management is expected to increase their PER because PER is a reference assessment before investors make decisions in investing their capital. The higher the PER, the higher the company's performance is also increasing.
- The company's management is expected to maintain the value of ROA because the larger the company's ROA, the greater the position of the company and the better the position of the company in terms of use of assets.

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