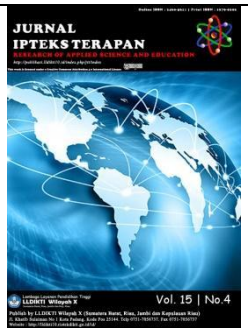

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EFFECT OF CR, DER AND NPM ON CHANGES IN PROFITS IN COAL COMPANIES, PETROLEUM AND GAS

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Abstract

Background : Economic developments in Indonesia have made the company more successful. This is due to the intense competition in the business sector.The study was in the field to measure the effect of changes in the current ratio (CR) or what is often called the debt to equity ratio(DER), and NPM (Profitability ratio) on changes in profits recorded on the BEI for the 2017-2019 timeframe. **Method** : Our study used a quantitative approach. Because this study's data is based on quantity and statistical data processing, descriptive research is the research method used. Our research used linear regression to examine the results, and this is the method we used. Over 90 coal, oil and gas mining enterprises are represented in the 2017-2019 sample of 49 populations of coal, oil, and gas mining firms. **Result :** Nonetheless, the components in this researcher's study affect the independent variables as well. however, CR does not affect changes in mining firm profitability. During 2017-2019, companies listed on the Indonesian Stock Exchange will have a significant effect on coal, oil, and gas prices. **Conclution :** Between 2017 and 2019, DER and NPM have a negative influence on the profitability of coal, oil, and natural gas mining companies.

Keyword ; Current Ratio, Debt Equity Ratio, Net Profit Margin, Changes In Profit

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INTRODUCTION

Economic developments in Indonesia have made the company more successful. This is due to the intense competition in the business sector. To stay competitive in today's business environment, companies must strengthen their corporate management and implement the right plans. Coal mining, oil and gas production, and other energy-related companies are some of the sectors that currently make a significant contribution to the Indonesian economy. Indonesia produces and exports a quarter of the world's coal. According to the International Energy Agency, coal-fired power plants provide at least 27% of worldwide output and more than 39% of all energy.

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Financial ratios equated as current ratio (CR), debt to equity ratio (DER), and net profit margin (NPM) can help analyze the company's financial performance. The relationship between CR, DER, and NPM can affect the company's profit because components such as current assets, current liabilities, total debt, total equity, net profit, and net sales are accounts that exist in the accounting cycle. Various things can affect the company's profit, whether it increases or decreases it. Financial reports are very important in assessing the performance and efficiency of the company. The more effective and efficient the management, the higher the company's ability to grow profits.

The current ratio (CR) measures the company's liquidity. The ratio for this is used as an analysis where the company is able to pay its short-term obligations or commonly called debts payable which are immediate when billed in full. According to his research that has been done by Kartika Tri Larasati (2017), statistically CR does not have a significant effect on salary fluctuations. While this is true, Siti Mas'Ulah's 2016 study found CR does not have a statistically significant impact on salary fluctuations.

The debt to equity ratio (DER) measures the financial health of the company. This ratio assesses the relationship between debt and equity. Wati and Subekti (2017) found that DER had a statistically significant effect on salary fluctuations. According to Larasati (2017), DER significantly affects the change in NPM.

Net Profit Margin (NPM) is a profitabilities metric. This percentage is derived from deducting taxes on gross profit and resulting in net income. Net Profit Margin represents the company's strength to create net profit for sales activities. From Silvia's research,

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Augustia in 2012 showed that NPM had no statistically significant effect on salary fluctuations. Tiara Puspitasari and Luluk Muhimatul Ifada (2016) found that NPM had a statistically significant effect on earnings fluctuations (Ifada. 2016).

The research phenomena that have been described in Table 1 can be seen below offering further specifications:

No	Kode Emiten	Tahun	CR	DER	NPM	LABA
1	ITMG	2017	2,433261	0,418075	2,537023	72,531.788.00
		2018	1,965673	0,314578	12,88980	8,380.103.629.50
		2019	2,024863	1,028168	7,332369	4,688136.144.00
2	SMRU	2017	2,016272	0,98254	4,421034	195,089.397.30
		2018	2,0082	0,991965	8,177598	162,839.545.40
		2019	1,857838	1,168944	26,77467	1,596.861.947.10
3	CITA	2017	4,03537	0,018586	6,554189	4,241.475.740.15
		2018	6,019258	1,179488	33,02212	13,221.739.424.30
		2019	7,999368	0,917057	16,84464	28,023.041.867.550

Table 1. Original Data

This can be seen in Table 1 for the company Indo Tambang Raya Megah Tbk (ITMG), where the current ratio decreased from 2.433261 to 1.965673 in 2017 and 2018 while profit also increased from 072,531,788,00 to 8,380,103,629.50. then it is concluded that there is an error in this company.

And similarly with the company SMR Utama Tbk (SMRU) the DER value decreased from 0.991965 to 1.168944 in 2018 and 2019, but its profit also increased from 162.839.545.40 to 1,596.861.947.10. This proves that there are irregularities, the researchers include this company in the phenomenon table.

METHODS

Research methods

This research focuses on several companies such as oil, gas, and coal mining sectors that are already on the IDX list from 2017 to 2019. The analysis is carried out quantitatively with a focus on companies on the IDX list for 2017-2019.

Population and Sample

The analysis involved 49 companies listed on the Indonesia Stock Exchange in 2017-2019. Purposive sampling was used in this study. Then obtained samples from 30 companies. The purposive criteria of this study took a sample of several companies:

1. Companies in the Coal, Oil and Gas mining sector are on the IDX list for the 2017-2019 period
2. Companies in the Coal, Oil and Gas mining sector that have uploaded periodic and complete company financial reports in 2017-2019
3. Coal, Oil and Gas Mining Companies that earn profits for the 2017-2019 period.

RESULTS AND DISCUSSION

Based on the considerations taken and used as many as 50 coal companies have been listed on the Indonesia Stock Exchange in 2017-2019. Purposive sampling was used. Of course, certain criteria are used by the company in a 3

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JURNAL IPTEKS TERAPAN
Research of Applied Science and Education V16.i2 (220-228)

E-ISSN : 2460-5611

year period, so that 90 samples are collected.

Descriptive statistics

This is a section of statistics that can provide in-depth information about a data set by calculating the min value, max value and average value, and calculating the standard deviation which is presented in table below:

Descriptive Statistics (AFTER Ln)

		Minimum	Maximum	Mean	Std. Deviation
Ln_CR	9	10.37	22.83	20.4763	1.94241
Ln_DER	9	12.74	22.79	20.2808	1.79666
Ln_NPM	9	18.16	23.02	21.5330	1.15471
Ln_LABA	9	14.95	32.20	25.2477	4.41975
Valid N (listwise)	9				

Source: SPSS 20

Table 2. Descriptive Statistics

The table above shows the minimum, maximum, mean, standard deviation, and change in earnings (Y) current ratio variables. with view:

1. Current ratio of 90 companies, with a mean of 20.4763 and a standard deviation of 1.94241.
2. In a sample of 90 companies, the debt-to-equity ratio ranges from 12.74 in the 2017 KKGI to 22.79 in APEX 2019, with an average of 20.2808 and a standard deviation of 1.79666.
3. In a sample of 90 companies, the net profit margin ranges from 18.16 in 2017 to 23.02 in 2018, with a mean value of 21,5330 and a Std Deviation of 1.15471.

Classical assumption test

Normality test

Determine whether the data is regularly distributed or from a normal population. The non-parametric statistical features of the Kolmogorov Smirnov Test used by researchers make the traditional approach to verifying the normality of data less challenging:

Results (After Ln)
One-Sample Kolmogorov-Smirnov Test

			Unstandardized Residual
N			90
Normal Parameters[a,b]		Mean	0E-7
		Std. Deviation	4.13602970
Most Extreme Differences		Absolute	.085
		Positive	.065
			-.085
Kolmogorov-Smirnov Z			.810
Asymp. Sig. (2-tailed)			.527

Source: SPSS 20

Table 3. Kolmogorov_smirnov Normality Test

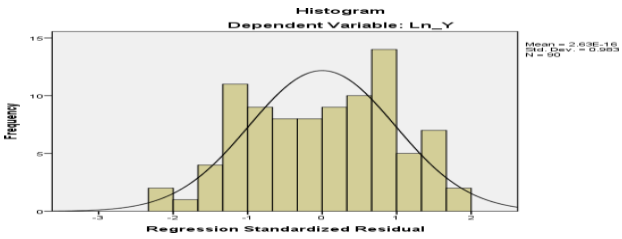
The characteristic of the normality test of the kolmogrov_smirnov test is that if it is significant 0.05 it can be called abnormal, otherwise if it is significant 0.05 it is called normal. The results of the normality test in the table

ISSN : 1979-9292

JURNAL IPTEKS TERAPAN
Research of Applied Science and Education V16.i2 (220-228)

E-ISSN : 2460-5611

above are normal because the significance value is 0.527≥0.05

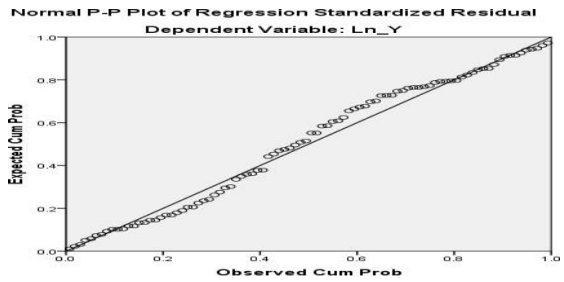


Source: SPSS 20

Figure 1. Normality Test Results with Histogram form (After Ln)

Following Ln, the histogram graph does not slope left or right, as in the normal distribution. Normal assumptions were met based on statistical testing and visual analysis.

It is clear from the normality probability plot and histogram graph that the data are normally distributed:



Source: SPSS

Figure 2. P-P Plot Normality Test Results (After Ln)

In the figure, the probability plot shows the data clustered around the diagonal and intersecting them, indicating that the normality assumption is wrong.

Multicollinearity Test

Multicollinearity test is useful for calculating the value of a dependent variable that has a relationship with a dependent variable. The existing relationship shows the problem of multicollinearity, which can be identified by looking at the correlation matrix. Multicollinearity is not allowed at VIF < 10 and tolerance > 1. Multicollinearity of the display results:

Model		Collinearity Statistics	
		Tolerance	VIF
1	LN_CR	.976	1.024
	LN_DER	.970	1.031
	LN_NPM	.993	1.007

Source: SPSS 20

Table 4. Multicollinearity Test Results (After Ln)

Coefficients

As shown in the table of calculation results, there is no multicollinearity between the variables studied, with VIF <10 and tolerance >0.01.

Autocorrelation Test

Autocorrelation testing is useful for testing the relationship between the errors of the confounders in the linear regression model. The D-W method is commonly used in autocorrelation testing in regression models.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.353a	.124	.094	4.20755	1.584

Table 5. Autocorrelation Test Results (After Lm) Model Summary

ISSN : 1979-9292

JURNAL IPTEKS TERAPAN
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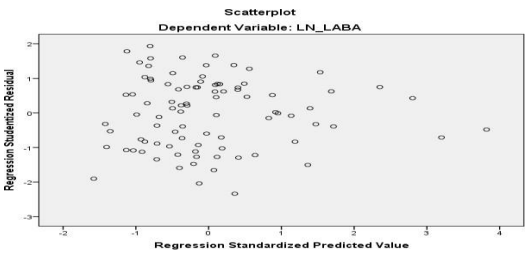
E-ISSN : 2460-5611

In the table above, the autocorrelation test of the Durbin-Watson value is 1.584 at "K" = 3 (sample = 90) the value of dl = 1.5889 and du = 1.7264 From the value of the D-W rule, the value of DL (4 - DW) DU or 1.5889≤ 2.416 1.7264 so that the conclusion does not occur autocorrelation.

Heteroscedasticity Test

Multiple regression seeks to see the direction and magnitude of the influence of the independent variable compared to the dependent variable. From the table below shows the results of multiple regression analysis:

Results



(After Ln)

Figure 3. Scatterplot Heteroscedasticity Test

The picture above shows that the data in this study were randomly distributed, so it was stated that there was no heteroscedasticity.

Results of Multiple Regression Analysis Data Analysis

Multiple regression seeks to see the direction and magnitude of the influence of the independent variable compared to the dependent variable. The table of test results below shows the results of multiple regression analysis:

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	61.803	11.516		5.367	.000
1 LN_CR	-.238	.232	-.105	-1.026	.308
LN_DER	-.747	.252	-.304	-2.963	.004
LN_NPM	-.767	.388	-.201	-1.980	.051

Table 5. Multiple Regression Equations Coefficientsa

In the table above, the multiple regression formula is obtained:

$$Y=a+b_1x_1+b_2\,x_2+b_3\,x_3+b_4\,x4+e$$

Change in profit = 61.803-0.238 LnCR – 0.747 LnDER-0.767 LnNPM+e

Based on the linear regression modal equation, it can be interpreted as:
1. If the variables CR, DER, and NPM remain constant, the change in profit is 61,803.
2. The coefficient of the current ratio is -0.238, meaning that if the current ratio decreases, the profit will decrease by 0.232.
3. With a coefficient of -0.747, each reduction in debt to equity reduces profit by 252.

ISSN : 1979-9292

JURNAL IPTEKS TERAPAN
Research of Applied Science and Education V16.i2 (220-228)

E-ISSN : 2460-5611

4. The coefficient of profit margin is -0.767, which means that every decrease in net profit margin, the profit is reduced by 0.388.

Based on the linear regression modal equation, it can be interpreted as:

Coefficient of Determination (R2)

This test is used to see the ability of the model to explain changes in the dependent variable. R2 has a value of 0 to 1. The decreasing value of R2 indicates that the power of the dependent variable to describe the dependent variable is very limited. If R2 is almost 1. the independent variable in a model can explain changes in the dependent variable.

Source : SPSS 20

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.353[a]	.124	.094	4.20755

Table 6. Coefficient of Determination (After Ln)

Model Summary[b]

Considering that the R square of 0.124 is simplified to 12.4% and the Adjusted R Square of 0.094 is simplified to 9.4%, then there is an effect on debt to equity and net profit margin, and the current ratio, the change in profit is 09.4%.

Simultaneous Hypothesis Testing (F Test)

To test a hypothesis, the researcher conducted an F test, which saw the effect of independent factors on the dependent variable.

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	216.045	3	72.015	4.068	.009[b]
1 Residual	1522.500	86	17.703		
Total	1738.545	89			

Table 7. Simultaneous Test Results (F) (After Ln) ANOVA[a]

By looking at the table above, the results for the F-count are 4.068 and the significance value is 0.009. The F-table, on the other hand, is 2.71 with a significance of 0.05. Fcount Ftable or 4.068 2.71 and 0.009 0.05 Current ratio, debt-to-equity ratio, and net profit margin all have a large impact on changes in the income of Coal, Oil, and Gas companies listed on the IDX for 2017-2019.

Partial Hypothesis Testing (t Test)

The findings of the t test can be used to identify the effect of each independent variable on the dependent variable.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	61.803	11.516		5.367	.000
1 LN_CR	-.238	.232	-.105	-1.026	.308
LN_DER	-.747	.252	-.304	-2.963	.004
LN_NPM	-.767	.388	-.201	-1.980	.051

Table 8. Partial Test Results (t) Coefficientsa

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Based on the processing of the table above, it is useful to present the results of the T test below:

1. With t-count 1.026 and t-table 1.66277, Ho is accepted and Ha is rejected with a significance of 0.308> 0.05. So, for the 2017-2019 period, the current ratio needs to be paid attention to changes in the income of companies in the Coal, Oil and Gas sector listed on the IDX.
2. Debt to equity ratio (X2) with tcount 2,963 and ttable 1,66277, then tcount ttable with a significance value of 0.004 <0.05. So that the Debt To Equity Ratio has an impact on changes in Coal, Oil and Gas business income on the IDX for the 2017-2019 period.
3. Net profit margin (X3) tcount 1.980 t table 1.66277 accept Ho Ha rejected by 0.051 <0.05. This ratio is very important for profit fluctuations in coal, oil and gas sector companies listed on the IDX in 2017-2019.

CONCLUSION

The conclusion can be explained from the research conducted by the author:

1. The current ratio does not have a significant impact on changes in the profits of coal, oil and gas companies listed on the IDX for the period 2017-2019.

2. Debt To Equity has a negative impact on changes in the profits of coal, oil and gas companies listed on the IDX for the period 2017-2019.

3. Net Profit Margin has a negative impact on changes in the profits of coal, oil and gas companies listed on the Indonesia Stock Exchange for the period 2017-2019.

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