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The Effect of Der, Roa, Inflation on Corporate Values and Its Implications on Stock Prices (Case Study in Mining Sector Companies Listed in Indonesia Stock Exchange (2014-2018 Period)

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Abstract*: The aim of this research is to find out the description and how big the influence of Debt to Equity Ratio (DER), Return on Assets (ROA), Inflation on Company Value and its implications on Stock Prices, on mining sector companies listed on the Indonesia Stock Exchange Period 2008-2017 both simultaneously or partially. This study discusses three variables, namely DER, ROA, inflation as an independent or independent variable, company value as an intervening variable or between, and stock price as a dependent or dependent variable. The method used in this research is descriptive and verification methods with a quantitative approach, so the research method used is descriptive survey method and explanatory survey method. In this research object there is a population frame. The technique taken is purposive sampling technique. Types of data can be grouped into primary data and secondary data. Data collection techniques used are library research (library research) and field research (field research). By using eviews, the results show that DER, ROA, inflation simultaneously influence the value of the company, partially DER has a significant effect on firm value, ROA has no effect and no significant effect on firm value, inflation has no effect and no significant effect on firm value, and value the company has no significant effect on stock prices.Based on this study, companies used as samples are still limited to companies registered in the mining sector so that further research needs to be done by using different research samples in a longer observation period so that it is expected that the results obtained can be generalized.*

Keywords*: DER, ROA, inflation, company value, stock prices*

I. INTRODUCTION

The Indonesian Capital Market has developed very rapidly from period to period, this is evidenced by the increasing number of shares traded and the higher volume of stock trading. In line with these rapid developments, the need for relevant information in making investment decisions in the capital market is also increasing. Capital Market is an indicator of a country's economic progress and supports the country's economy (Robert Ang, 2007)

The expectation of investors before investing is to get a picture of the value of the company, PBV is the value of the company with an investment valuation ratio that is often used by investors to compare the market value of a company's stock with its book value. This PBV ratio shows how many shareholders are financing the company's net assets. Investors will be very happy if they get a PBV that is getting higher over time, and that will have implications for the stock price.

Investors in investing their funds need a variety of useful information to predict investment returns in the capital market. To conduct an analysis and select stocks must use a market approach, one of which is a fundamental approach.

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Fundamental factors of the company that can explain the strengths and weaknesses of the company's financial performance include financial ratios. In making investment decisions in a company, investors generally do a fundamental analysis obtained from the analysis of the issuer's company financial statements.

In essence the mining sector is very influential on the interest of investors who will invest their capital. In investing, investors and potential investors need to gather information as one of the basic considerations in making investment decisions in the capital market. This source of information can be obtained by analyzing financial statements. Therefore, every year public companies listed on the Stock Exchange are obliged to save and submit financial reports to the Stock Exchange, investors and the public, both annual and interim quarterly financial reports.

Companies that have gone public, their shares can be traded on the stock market to get additional capital used and for business development, this also includes companies that enter the financial sector. Researchers see that currently mining companies tend to have a stock price condition that has decreased significantly, so the writer is more interested in taking data in the mining sector due to the fluctuation.

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Table 1. Changes in Average Share Price of the SectorMining on the Indonesia Stock Exchange in 2008-2017

Year	Stock Price
2014	Rp. 1.459
2015	Rp. 1.074
2016	Rp. 1.092

2017	Rp. 1.492
2018	Rp. 1.905

Source : finance.yahoo.com

The decline in stock prices resulted from the value of the company which also declined. A company may experience price fluctuations all the time due to various factors both micro and macro. The occurrence of these fluctuations get different responses and reactions from each investor to information obtained in the market. If an investor wants a low price, the risk to be borne is also low. Considering the importance of company value in determining the magnitude of stock prices, the dynamics of changes in stock prices is an interesting thing to study.

Based on the description of the theory and facts that have been stated above, the authors chose the research title **"Effect of DER, ROA, Inflation on Company Value and Its Implications on Share Prices (Case Study of Mining Sector Companies Listed on the Indonesia Stock Exchange (2014-2018 Period) ".**

FRAMEWORK

Debt to Equity Ratio (DER) is the ratio of the value of debt to equity. The lower the DER means the higher the value of the company. A low DER shows that the company's leverage is low and this is beneficial for investors because the company is able to deal with business fluctuations. Based on this description for investors, the higher the DER shows the greater the company's dependence on external parties (creditors). This has an impact on the decline in the value of the company so that investors will reduce investor interest in investing their funds in the company.Based on the description it can be concluded that the debt to equity ratio has a negative effect on the value of the company. Return on Assets (ROA) describes the ratio of earnings to total assets so that it illustrates the profit potential of a company that is used as a source of business funding. The higher ROA, the higher the value of the company. Inflation is a tendency regarding prices to rise in general and continuously, higher inflation causes a weakening of the value of the company, on the contrary low inflation will cause a strengthening of the value of the company. The ratio of company value is proxied to Price to Book Value (PBV). High Price to Book Value indicates a tendency for good company performance, this is due to the market value of its shares moregreater than the book value. A high Price to Book Value indicates a tendency for good company performance. This is because the market value of the shares is

greater than the book value. Thus, Price to Book Value has a positive effect on stock prices. The following is a picture of the framework in this study:

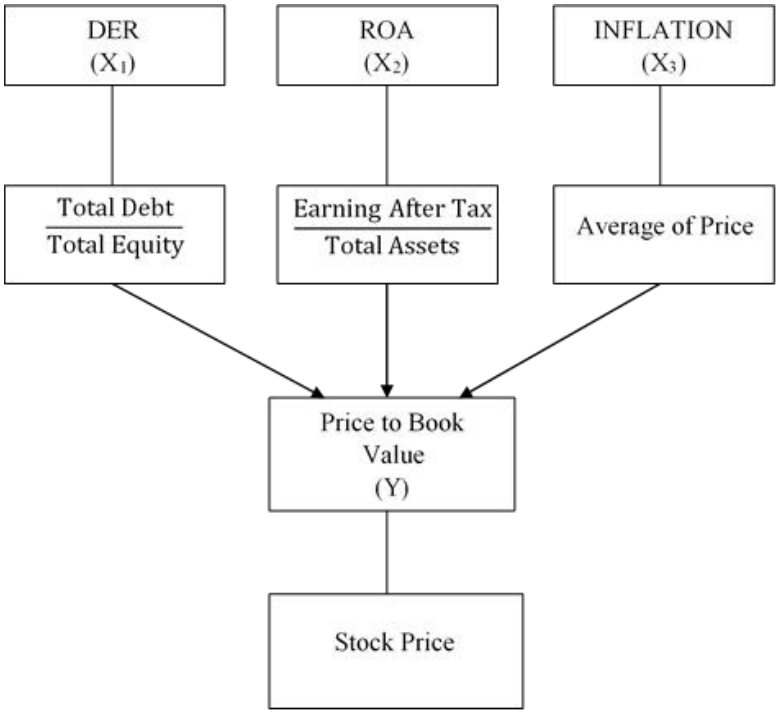

Figure 1. Kerangka Pemikiran

II. METHODOLOGY RESEARCH

The population in this study are mining sector companies listed on the Indonesia Stock Exchange (IDX) obtained from the PIPM (Capital Market Information Center) are twenty-two companies. The technique taken ispurposive sampling technique. In this study, the number of samples was determined through four criteria, namely:

1. The company was included in the mining sector during the 2014-2018 period.
2 The company continued listing on the Indonesia Stock Exchange during the 2014-2018 period (never suspended).
3 Published financial statements for the period 2014-2018
4. The company has recorded closing price data for 2014-2018.in the 2014-2018

Using the above criteria, the number of shares of the mining sector companies that were sampledperiod were twelve companies.

III. DATA ANALYSIS AND DISCUSSION

Descriptive Analysis Test

Descriptive Analysis Test is a research method that provides an overview of situations and events so that this method intends to hold an accumulation of valid baseline data. Table 2 below shows the results of descriptive statistical tests for independent variables in the study.

Table 2. Descriptive Statistics Test Results

	DER	ROA	INFLATION	PBV	STOCK PRICE
Mean	1.429050	0.028165	0.046680	1.790833	2893.467
Median	0.720000	0.040400	0.038100	1.130000	527
Maximum	11.91000	0.380300	0.064200	11.05000	25873

Minimum	-7.170000	-0.643900	0.032000	-1.010000	50
Std. Dev.	2.697351	0.144741	0.014394	2.245762	5682.112
Observations	60	60	60	60	60

Based on the table above, it appears that the results of data analysis obtained from testing of 12 Mining Sector companies on the Indonesia Stock Exchange period 2014-2018 namely DER variable (X1) has a minimum value of -7,170; a maximum value of 11.91; and standard deviation of 2.321531. Variable (X2) ROE has a minimum value of -0.6439; a maximum value of 0.3803 and a standard deviation of 0.144741. Inflation variable (X3) has a minimum value of 0.0320; a maximum value of 0.0642 and a standard deviation of 0.014394. The corporate value variable (Y) has a minimum value of -1,010, a maximum value of 11.05 and a standard deviation of 2.245762. Variable stock price (Z) has a minimum value of Rp.50; maximum value of Rp. 25,873 and standard deviation 5682,112.

Classical Assumption Testing

The assumptions of classical is used in research so that the conclusions obtained do not lead to biased values. The classic assumption test in this study includes the normality test, multicollinearity test, autocorrelation test, and heteroscedasticity test.

1. Normality Test

Normality test is performed to determine whether each variable has a normal distribution or not. The normality test results can be seen in Figure 2 below.

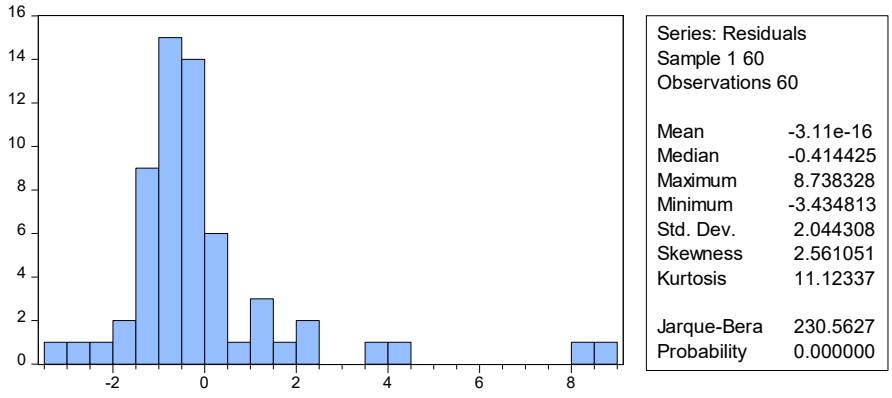

Figure 2. Normality Test Result

Based on Figure 2 above it appears that the Jarqu-Bera probability value of 0.0000000. the probability value is 0.000000 <0.05, which indicates that the data are not normally distributed, however the data can still be used for further testing, as stated by McClave (2011: 300) expressing an opinion that is with the law of the central limit theorem states that for most samples populations with an observation size (n)> 30 are considered to be normally distributed, andthe data in this study were 60 observations.

2. Heteroscedasticity Test

Heteroscedasticity Testto find out whether in the regression model there is an unequal variance from the residuals of one observation to another. If the variance from one observation residual to another observation is fixed then it is called homoskedatisitas. Table 4 follows the results of the heteroscedasticity test:

Table 4. Heteroscedasticity Test Result

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.258615	Prob. F(3,56)	0.2974
Obs*R-squared	3.790003	Prob. Chi-Square(3)	0.2851
Scaled explained SS	16.71123	Prob. Chi-Square(3)	0.0008

Based on table 4 of the heteroscedasticity test above, the test results show that the Obs * R-squared probability value or Prob value. Chi-Square (20) of 0.2851> 0.05 which shows that there is no heteroscedasticity symptoms in this regression model.

3. Autocorrelation Test

Autocorrelation test aims to test whether in the linear regression model there is a correlation between the error of the intruder in a certain period and the error of the intruder in the previous period. Multicollinearity test results can be seen in the following table 5:

Table 5. Autocorrelation Test results

R-squared	0.171362	Mean dependent var	1.790833
Adjusted R-squared	0.126970	S.D. dependent var	2.245762
S.E. of regression	2.098352	Akaike info criterion	4.384522
Sum squared resid	246.5725	Schwarz criterion	4.524145
Log likelihood	-127.5357	Hannan-Quinn criter.	4.439136
F-statistic	3.860252	Durbin-Watson stat	0.717354
Prob(F-statistic)	0.013980		

Based on the data in table 5 of the autocorrelation test results above, there is a Durbin Watson value of 0.717354, then the value will be compared with the DW table with the number of observations (n) = 60 and the number of independent variables (k) = 3 and a significance level of 5%, the dL value is obtained = 1.4797 and the value of dU = 1.6889. With the terms dU <dW <4-dU which means there is no autocorrelation, it can be seen that the provisions of dU (1.6889) <dW (0.717354) <4-dU (2.3111) are not met which means there is a problemautocorrelation.

Nevertheless, it can be used for further analysis as stated by Basukiand Yuliadi (2015: 152) which states that the autocorrelation test is not meaningful for panel data, because it is only performed on time series data (time series).

4. Multicollinearity Test

Multicollinearity Test aims to test whether the regression model found a correlation independent antarvariable. The results of the multicollinearity test can be seen in table 6 below:

Table 6. Multicollinearity Test Results

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
DER	0.010305	1.291482	1.004698
ROA	3.912285	1.140568	1.098277
INFLASI	395.4894	12.84131	1.097974
C	0.999547	13.62065	NA

Based on the data above, it can be seen that the results of VIF (Variance Inflation Factors) show the value of each variable is smaller than 10 and the Tolerance results show the value of each.

Model Test

1. **F test**

To see whether all independent variables (DER, ROA, and inflation) included in the model have a linear relationship with the dependent variable

(PBV). The F test is the initial stage of identifying a regression model that is estimated to be feasible (fix) or not feasible here means that the estimated model is feasible to use to explain the effect of independent variables on the dependent variable. The F test results can be explained by table 7 as follows:

Table 7.F Test Results

R-squared	0.341899	Mean dependent var	0.433099
Adjusted R-squared	0.306643	S.D. dependent var	1.300751
S.E. of regression	1.083110	Sum squared resid	65.69507
F-statistic	9.697763	Durbin-Watson stat	1.902347
Prob(F-statistic)	0.000030		

Based on table 7 of the F test above, it can be seen the significance level value of 0.000030 <0.05 (level of significant) which shows that the DER, ROA and Inflation variables simultaneously influence PBV.

Hypothesis testing

1. t test

To see whether the influence of the independent variable on the dependent variable is real, it needs to be tested by partial t-test.

Tabel 8.T test results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DER	0.319162	0.066036	4.833169	0.0000
ROA	-0.367437	1.337739	-0.274670	0.7846
INFLASI	-19.71475	10.68157	-1.845679	0.0702
C	2.265368	0.784726	2.886827	0.0055

Based on the outputs above, it is interpreted as follows:

1) t test for DER

Based on the results of t test table analysis shows that the DER variable has a significance value of (0.0000 <0.05) which means that DER has significant and significant effect on PBV, besides that seen that t arithmetic is greater than t table that is (4,833169> 1.67252). It means that DER has a significant effect on PBV.

2) t test for ROA

Based on the results of the analysis of the t test table shows that the ROA variable has a significance value of (0.7846> 0.05) which means ROA has no effect and is not significant on PBV, but it is also seen that t arithmetic is greater than t table,(-1,845679 <-1,67252). MeansROA on PBV has no significant effect.

3) t test for inflation

Based on the results of the analysis of the t test table shows that the inflation variable has a significance value of (0.0702 <0.05) which means that inflation has no effect and is not significant on PBV, but also it is seen that t count is less than t table

that is (-1.845679> -1.67252). Means Inflation against PBV has no significant effect.

Determination Coefficient Test

This coefficient is a value that shows the magnitude of the influence of the independent variable (X) on the dependent variable (Y). This value is obtained from the percentage value of the squared correlation coefficient, the value ranges from 0-1 (0% - 100%) the closer it is to one, the greater the effect. The results of the coefficient of determination test can be explained by table 9, as follows:

Tabel 9. Determination Coefficient Test Results

R-squared	0.341899	Mean dependent var	0.433099
Adjusted R-squared	0.306643	S.D. dependent var	1.300751
S.E. of regression	1.083110	Sum squared resid	65.69507
F-statistic	9.697763	Durbin-Watson stat	1.902347
Prob(F-statistic)	0.000030		

Based on the table above it can be seen that the value of R Square is 0.341899 This shows that 34.19% of the dependent variable variation, namely PBV can be explained by variations of the three variables namely DER, ROA, and Inflation. While the remaining 65.81% is explained by other factors outside of research capital.

Output Hypothesis (PBV on Stock Prices)

1. **F test**

F test is the initial stage of identifying a regression model that is estimated to be feasible (fix) or not feasible here means that the estimated model is feasible to use to explain the effect of independent variables on the dependent variable.

Tabel 10. F test result

R-squared	0.185420	Mean dependent var	1.063886
Adjusted R-squared	0.171375	S.D. dependent var	0.619594
S.E. of regression	0.564010	Sum squared resid	18.45020
F-statistic	13.20231	Durbin-Watson stat	1.598775
Prob(F-statistic)	0.000594		

Based on the above table, it can be seen the significance level value of 0.000594 <0.05 (level of significant)which shows that the DER, ROA and Inflation variables simultaneously influence the stock price.

2. **T test**

To see whether the independent variable (PBV) partially influences the dependent variable (Stock Price).

Tabel 11.T test result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PBV	0.148963	0.040798	3.651207	0.0006
C	6.187353	0.448731	13.78855	0.0000

Based on the results of the analysis of table 11 t test shows that the Stock Price variable has a significance value of (0,0006 <0.05) which means that the PBV has an influence and significant effect on the Stock Price, in addition it is also seen that t arithmetic is greater than t table that is

(3 , 651207> 1.67155). Means PBV on stock prices has a significant effect.

3. Coefficient of Determination

The coefficient of determination with the independent variable (PBV) of the independent variable (stock price).

Tabel 12. Determination Coefficient Test Results

R-squared	0.185420	Mean dependent var	1.063886
Adjusted R-squared	0.171375	S.D. dependent var	0.619594
S.E. of regression	0.564010	Sum squared resid	18.45020
F-statistic	13.20231	Durbin-Watson stat	1.598775
Prob(F-statistic)	0.000594		

Based on the table above it can be seen that the value of R Square is 0.185420 This shows that as much as 18.54% of the dependent variable variation that is PBV can be explained by variations of the variable namely Stock Prices. While the remaining 81.46% is explained by other factors outside of research capital.

IV. CONCLUSION

From the results of empirical research on 14 samples of Mining Sector companies listed on the IDX during the 2014-2018 period and from the results of the analysis and testing conducted, several conclusions can be drawn including:

1. The picture of companies that have the highest DER is PT. Bumi Resource, Tbk with a DER of 11.91 in 2017, and the company with the lowest DER is PT. Bumi Resource, Tbk with a DER of -7.17 in 2014.
2. The description of ROA companies in the Mining Sector fluctuated during 2014-2018. The highest ROA value is owned by PT. Bayan Resource, Tbk in 2017 was 0.3803 while the lowest ROA value was owned by PT Bumi Resource, Tbk in 2015 amounting to -0.6439.
3 An illustration of the value of inflation in the Mining Sector during 2014-2018. The highest inflation value in 2014 was 0.0642 while the lowest inflation value in 2018 was 0.0320.
4 Description of PBV value of Mining Sector companies during 2014-2018. The value of the highest share price is owned by PT. Bayan Resource, Tbk in 2015 amounted to 11.05 while the lowest PBV value was owned by PT. Bumi Resource in 2014 amounted to -1.01.
5 An illustration of the value of the company's shares in the Mining Sector in 2014-2018. The value of the highest share price is owned by PT. Indo Tambangraya Megah, Tbk in 2018 amounted to 25,873 while the lowest share price value is owned by PT. Darma Henwa during 2014-2018 was 50.
6. DER affects the price of shares in the Mining Sector Company listed on the Indonesia Stock Exchange in the 2014-2018 Period.
7 ROA has no effect on share prices on Mining Sector Companies listed on the Indonesia Stock Exchange in the 2014-2018 Period.

8 Inflation has no effect on share prices in Mining Sector Companies listed on the Indonesia Stock Exchange in the 2014-2018 Period.

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