

# The Effects of Sales Growth, Current Ratio, Total Asset Turnover, Debt to Asset Ratio, and Debt to Equity Ratio on the Return on Equity in Energy and Mining Companies

Muhani<sup>1</sup>, Kumba Digdowiseiso<sup>2</sup>, Kintan Mayang Prameswari<sup>3</sup>

<sup>1,2,3</sup>University of National, Jakarta, Indonesia

[kumba.digdo@civitas.unas.ac.id](mailto:kumba.digdo@civitas.unas.ac.id)

## Abstract

*This study aims to determine the effects of Sales Growth (SG), Current Ratio (CR), Total Asset Turnover (TATO), Debt to Equity Ratio (DER), and Debt to Asset Ratio (DAR) on the Return on Equity (ROE) of Energy and Mining sector companies, listed on the Indonesia Stock Exchange for the 2015-2019 period. The population in this study were 47 energy and mining companies. The sampling technique used was purposive sampling and obtained a sample of 14 companies. This study obtained the secondary data in the form of financial statements and can be accessed through [www.idx.co.id](http://www.idx.co.id). The analytical technique used in this study is linear regression of panel data using the STATA 16 program. The results showed that SG, TATO, DER, and DAR all had a insignificant effect on ROE in energy and mining companies. However, CR produced a negative and significant effect on ROE in these companies.*

## Keywords

Sales growth; current ratio; total asset turnover; debt to equity ratio; debt to asset ratio; return on equity.



## I. Introduction

The company's performance plays a very important role for companies that have gone public because the high performance of the company will be followed by the prosperity of the shareholders (Jogiyanto, 2015). One of the considerations of potential investors to invest their capital is to look at the financial performance of a company. If the company is considered good and provides future benefits, many potential investors will invest in the company. Conversely, if the financial performance of a company is not good, then potential investors will think again to invest their capital in the company.

The company cannot always determine the selling price of the product as desired, because several competitors offer a certain price. To produce products that have competitive prices and maintain good product quality to earn a profit, they must be able to sort out, workaroud, or even reduce costs or activities that are not needed in the production process so that the profits to be obtained are more optimal. Therefore, a target costing. (Palulun, Y. et al. 2021)

In the development of the world of education, especially after the rolling reforms, new phenomena have arisen in educational institutions, which are schools that use the term Integrated Islamic Schools (Titik, 2010: 42). The school is essentially aimed at helping parents teach good habits and add good character, also given education for life in society that is difficult given at home. Thus, education in schools is actually part of education in the family, which is also a continuation of education in the family (Daulay in Ayuningsih, W. et al. 2020).

Economic development in Indonesia can be driven through several industrial sectors, ranging from pharmaceuticals, construction, agriculture, mining, finance, and property to

manufacturing industries (Magdalena & Suhatman, 2020). All of these encourage the country's economic activities. One of the leading sectors is the energy and mining sector. Companies operating in energy and mining are companies that produce and sell gold, coal and other mining. In Indonesia, there are many companies operating in this field and the number of energy and mining companies listed on the Indonesia Stock Exchange increases steadily.

Table 1 shows that the average return on equity (ROE) of energy and mining companies in the 2015-2019 period. ROE is actually a company's financial ratio that is used to see the company's profitability based on capital compared to the shares owned, regardless of the company's debt.

**Table 1.** Average SG, CR, TATO, DER, DAR, and ROE in Energy and Mining Sector Companies for the 2015-2019 Period

No	Company	SG	CR	TATO	DER	DAR	ROE
1	PT Super Energy Tbk (SURE)	0,36	0,324	0,38	0,048	0,84	-0,03
2	Elnusa Tbk (ELSA)	1,044	1,384	1,026	0,686	0,402	0,114
3	Mitra Investindo Tbk (MITI)	0,81	0,99	0,406	0,914	0,716	0,462
4	PT Timah Tbk (TINS)	0,974	1,526	0,552	0,59	0,464	0,334
5	Central Omega Resources Tbk (DKFT)	1,044	1,016	1,294	1,314	0,388	0,524
6	Golden Eagle Energy Tbk (SMMT)	0,866	0,436	0,114	0,658	0,394	0,11
7	PT Borneo Olah Sarana Sukses Tbk (BOSS)	0,148	0,588	0,788	0,428	0,354	0,532
8	Cita Mineral Investindo Tbk (CITA)	0,01	0,72	0,7	1,404	0,574	0,272
9	SMR Utama Tbk (SMRU)	1,15	1,202	0,404	1,144	0,346	0,13
10	Exploitasi Energi Indonesia Tbk (CNKO)	0,628	0,564	0,472	2,36	0,682	1,284
11	PT Temas Tbk (TMAS)	1,104	0,49	0,824	1,594	0,606	0,154
12	PT Terregra Asia Energy (TGRA)	0,374	-1,29	0,088	0,21	0,296	-1,2
13	Leyand International Tbk (LAPD)	0,87	0,132	0,282	0,986	0,72	0,188
14	PT Sky Energy Indonesia Tbk (JSKY)	0,898	1,168	0,9	2,274	0,7	0,478

Source: Authors' Calculation (2021)

Table 1 explains that the values obtained from each of the indicators in Energy and Mining Companies above vary greatly. This is something that needs to be studied to answer research problems. Based on the description above, there are several results of previous research. Hansen & Juniarti (2014) show that Sales Growth (SG) has a positive and insignificant effect on Return on Equity (ROE). Furthermore, Sary et al. (2021) prove that Current Ratio (CR), Total Asset Turnover (TATO), and Debt to Asset Ratio (DAR) have a positive but not significant effect on Return on Equity (ROE). Meanwhile, the results of research conducted by Luviana (2020) show that the Current Ratio (CR) and Debt to Asset Ratio (DAR) have a positive and significant effect on Return on Equity

(ROE). On the other hand, Debt to Equity Ratio (DER) has a negative and significant effect on Return on Equity (ROE). Meanwhile, Total Asset Turnover (TATO) has a positive and insignificant effect on Return on Equity (ROE).

Based on the background, this study aims to investigate whether Sales Growth (SG), Current Ratio (CR), Total Asset Turnover (TATO), Debt to Equity Ratio (DER), and Debt to Asset Ratio (DAR) have a significant effect on the Return on Equity (ROE) of Energy and Mining sector companies, listed on the Indonesia Stock Exchange during the period 2015-2019.

## II. Review of Literature

### 2.1. Financial Management

Financial management is one of the most important fields in a large or small-scale company, both profit and non-profit, which has a great attention in developing an increasingly advanced business world (Brigham & Houston, 2014). As the competition from one company to another is getting tougher, uncertain economic conditions cause many companies went bankrupt. According to Fahmi (2016), it is the entire company's activities related to efforts to obtain the necessary funds with minimal costs and in the most favorable terms and conditions.

### 2.2. Return on Equity

According to Tandelilin (2017), return on equity (ROE) is the ratio used to measure the net profit obtained from the manager of the capital invested by the owner of the company. The higher the ROE gives an indication to the shareholders that the rate of return on investment is getting higher. Furthermore, the ROE can be said to be good if it is greater than 12%. The formula for ROE is as follows:

$$\frac{\text{Net Income}}{\text{Total Equity}} \times 100\%$$

### 2.3. Sales Growth

Sales growth reflects the company's ability from time to time. The higher the company's sales growth rate, the more successful the company is in carrying out its strategy. According to Fahmi (2016), sales growth is a growth ratio that measures how much the company's ability to maintain its position in the industry and economic development in general. The growth ratio can be gauged in terms of sales, earnings after tax, earnings per share, dividends per share, and stock market prices. To measure sales growth, the following formula is used as follows:

$$\frac{\text{Sales} - \text{Sales}_t}{\text{Sales}_t} \times 100\%$$

### 2.4. Current Ratio

The current ratio consists of the calculation of the liquidity ratio in which the calculation method is the simplest with other calculations. The current ratio is a ratio to measure the company's ability to pay short-term obligations or debts that are due immediately when billed in their entirety (Fahmi, 2016). The formula to find the Current Ratio is as follows:

$$\frac{\text{Current Asset}}{\text{Current Liabilities}} \times 100\%$$

## 2.5. Total Asset Turnover

According to Brigham & Houston (2014), total asset turnover is the ratio of asset management last that can measure the turnover of all company assets. It can also measure how much sales are obtained from each Rupiah of assets. If the company does not generate sufficient business volume for the size of the investment of its total assets, the sale must be abandoned. The formula used to calculate Total Asset Turnover is as follows:

$$\frac{\text{Sales}}{\text{Total Assets}} \times 100\%$$

## 2.6. Debt to Equity Ratio

According to Brigham & Houston (2014), the Debt to Equity Ratio is used to assess debt with equity. This ratio is useful for knowing the amount of funds provided by the borrower with the owner of the company. For companies, the greater this ratio, the better. On the contrary, with a low ratio, the higher the level of funding provided by the owner and the greater the security limit for the borrower in the event of a loss or depreciation of the asset value. The formula to find the Debt to Equity Ratio (DER) is as follows:

$$\frac{\text{Total debt}}{\text{Total Equity}} \times 100\%$$

## 2.7. Debt to Asset Ratio

According to Fahmi (2016), debt to asset ratio is a debt ratio used to measure the ratio between total debt and total assets. In other words, how much the company's assets are financed by the company's debt affects asset management. The formula used is as follows:

$$\frac{\text{Total liabilities}}{\text{Total Assets}} \times 100\%$$

## III. Research Method

In this study, the independent variables consist of Sales Growth (X1), Current Ratio (X2), Total Asset Turnover (X3), Debt to Equity Ratio (X4), and Debt to Asset Ratio (X5). While the dependent variable is Return on Equity (Y). This study uses Energy and Mining Companies listed on the Indonesia Stock Exchange for the 2015-2019 period.

This study uses data sources in the form of documents both internal (i.e. within the object of study) and external (i.e. outside the object of study). Sources of data include official documents issued by energy and mining companies that are the obtained from (www.idx.co.id). The population are all energy and mining companies listed on the Indonesia Stock Exchange (go public) listed in 2015-2019, amounting to 47 companies. The samples are 14 energy and mining companies, which can be generated through purposive sampling, namely the selection of data samples in a company during the research period based on certain considerations or criteria.

In this study, the author chose panel data regression which is a combination of time series regression and cross-section regression since the research object occurred in different periods and there were several different samples. According to Gujarati (2013), the advantages of panel data analysis are as follows: 1). Panel data estimation technique can overcome heterogeneity; 2). By combining time series and cross-sectional observations, panel data provides more information, more variation, less collinearity

between variables, more degrees of freedom, and more efficient; 3). Panel data is best suited for studying the dynamics of change; 4). Panel data is best for detecting and measuring impacts that simply cannot be seen in pure cross-section or pure time series data; 5). Panel data makes it easy to study complex behavioral models; and 6). Panel data can minimize the bias that can occur when aggregating individuals into large aggregations.

All in all, the basic equation can be summarized as follows:

$$Y_{it} = \beta_0 + \beta_1 SG_{it} + \beta_2 CR_{it} + \beta_3 TATO_{it} + \beta_4 DER_{it} + \beta_5 DAR_{it} + \varepsilon_{it}$$

Where:

Y = Return on Equity

SG = Sales Growth

CR = Current Ratio

TATO = Total Asset Turnover

DER = Debt to Equity Ratio

DAR = Debt to Asset Ratio

$\varepsilon$  = Error term

i = Energy and Mining companies

t = Period of observation

$\beta_0$  = Constant

$\beta_1, \beta_2, \beta_3, \beta_4$  = Coefficient of independent variable

#### IV. Result and Discussion

Based on the results of the Hausman test, it can be seen that the  $\text{prob} > \chi^2$  value is 0.1708, which means it is greater than (0.05), then  $H_0$ : random effect is accepted and  $H_1$ : fixed effect is rejected. Thus, the efficient model is a random effect model. Meanwhile, the results of the Lagrange Multiplier test showed that the  $\text{prob} > \chi^2$  value of 1,000 is greater than a (0.05), then  $H_0$ : pooled least square is accepted and  $H_1$ : Random effect is rejected. Thus, the efficient model is the pooled least square model. Overall, the results of both Lagrange multiplier and Hausman tests indicate that the model that has the most efficient estimators is the pooled least square model.

Moving to the results of the normality test, it can be shown that the value ( $\text{prob} > z$ ) of 0.00003 is smaller than 0.05. Thus, the model is not normally distributed and we transform all variables in the model in the form of natural logarithm. On the heteroscedasticity, the result of the calculation of the value is more than 0.10, which means that there is no correlation between the independent variables. The results of the calculation of the VIF value also show the same, there is no single independent variable that has a VIF value of more than 10. So it is concluded that there is no symptom of multicollinearity between independent variables in the regression model. Similarly, the Autocorrelation test the data used is free from autocorrelation problems which is indicated by an estimated autocorrelation value of zero. However, based on the results of the multicollinearity test, the value of  $\text{Prob} > \chi^2$  obtained a value of 0.0043, which means it is smaller than 0.05. Therefore, the model contains heteroscedasticity. To solve this issue, we solve the heteroscedasticity with robust standard of error.

**Table 2.** Analysis of Pooled Least Square Model

Variabel	Pooled Least Square		
	Coef	Robust Std Err	Prob
SGT	2.99	1.85	0.11
CRT	-0.08	0.03	0.01
TATOT	-3.98	2.65	0.14
DERT	0.77	0.79	0.33
DART	3.43	5.23	0.51
Cons	6.31	5.22	0.23
Number of obs	70		
R-squared	0.374		
Prob>F	0.011		

*Source: Authors' Calculation (2021)*

On Table 2, the F test showed that the probability value is 0.0113, which is smaller than 0.05. It is concluded that the variables of Sales Growth, Current Ratio, Total Asset Ratio, Debt to Assets Ratio, and Debt to Equity Ratio simultaneously have a significant effect on the Return on Equity in Energy and Mining companies listed on the Indonesia Stock Exchange for the 2015-2019 period. Meanwhile, the Coefficient of Determination ( $R^2$ ) is about 0.374, which means that Sales Growth, Current Ratio, Total Asset Ratio, Debt to Assets Ratio, and Debt to Equity Ratio can explain 37.4% variation of return on equity, while 62.6% is explained by other variables, which were not included in this study.

Table 2 highlights that the sign and coefficient of Sales Growth is positive and 2.99, respectively. It means that an increase of 1% in the SG variable will increase ROE by 2.99% assuming that the value of the other independent variables is equal to zero. In addition, the probability value of 0.11 is more than a significant level of 5% ( $0.11 > 0.05$ ), which can be concluded that Sales Growth has a positive and insignificant effect on Return on Equity. This results support Hansen & Juniarti's (2014) findings.

Meanwhile, the sign and coefficient of Current Ratio is negative and 0.08, respectively. This indicates that every time there is an increase of 1% in the variable of CR, ROE will decrease by 0.08%, assuming the value of the other independent variables remains constant. Moreover, the probability value of 0.011 is less than the 5% significance level ( $0.011 < 0.05$ ), which can be concluded that Current Ratio has a negative and significant effect on the Return on Equity. Of course, this result contradicts with Luviana's (2020) findings.

Moving to other indicators, the sign and coefficient of Total Asset Turnover is negative and 3.98, respectively. However, the probability value is 0.139, which is greater than 0.05. It is concluded that TATO has a negative and insignificant effect on Return On Equity. This result is somewhat consistent with Luviana's (2020) and Sary's et al. (2021) findings. Similar to Sary's et al. (2021) findings, both DER and DAR have a positive and insignificant effect on the Return on Equity.



## V. Conclusion

This research was conducted on 14 energy and mining companies listed on the Indonesia Stock Exchange for the 2015-2019 period. This study was conducted with the aim of knowing the effect of sales growth, current ratio, and total asset turnover, debt to equity ratio and debt to asset ratio on the return on equity of energy and mining companies. From the results of research and discussion, it can be concluded that Sales Growth, Debt to Equity Ratio, and Debt to Asset Ratio have a positive and insignificant effect on Return on Equity, while Total Assets Turnover has a negative and insignificant effect on ROE. In contrast, Current Ratio has a negative and significant effect on Return on Equity in energy and mining companies.

## References

- Ayuningsih, W. et al. (2020). Implementation of Islamic Education Curriculum Development in Al-Ulum Islamic School Medan. *Budapest International Research and Critics in Linguistics and Education (BirLE) Journal*. P. 1033-1044.
- Brigham, E.F., & Houston, J.F. (2014). *Essentials of Financial Management*. Singapore: Cengage Learning.
- Fahmi, I. (2016). *Pengantar Manajemen Keuangan*. Bandung: CV Alfabeta.
- Gujarati, D.N. (2013). *Basic Econometrics*. New York: The McGraw-Hill Companies, Inc.
- Hansen, V., & Juniarti. (2014). Pengaruh family control, size, sales growth, dan leverage terhadap profitabilitas dan nilai perusahaan pada sektor perdagangan, jasa, dan investasi. *Business Accounting Reviews*, 2(1), 121-130.
- Jogiyanto. (2015). *Teori Portofolio dan Analisis Investasi*. Yogyakarta: PT BPF.
- Luviana, M. (2020). Faktor yang Mempengaruhi Profitabilitas pada Perusahaan Food and Beverage yang Terdaftar di Bursa Efek Indonesia. Available online: <https://dspace.uui.ac.id/123456789/28504> (accessed on 10 December 2021).
- Magdalena, S., & Suhatman, R. (2020). The Effect of Government Expenditures, Domestic Investment, Foreign Investment to the Economic Growth of Primary Sector in Central Kalimantan. *Budapest International Research and Critics Institute-Journal (BIRCI Journal)*, 3(3), 1692-1703.
- Palulun, Y. et al. (2021). Analysis of Readiness to Use Target Costing Method in Production Cost Efficiency Efforts at Risha Bakery. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*. P. 6385-6395.
- Sary, S., Denita, L., Aprilida, & Cyntia. (2021). Pengaruh Perputaran TATO, Rasio Lancar dan DAR Atas ROE pada Perusahaan Industri Barang Konsumsi di BEI 2015 – 2019. *Jurnal Manajemen dan Organisasi*, 12(2), 146-155.
- Tandelilin, E. (2017). *Pasar Modal Manajemen Portofolio dan Investasi*. Yogyakarta: PT Kanisius.