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### Capital Structure and Profitability: Evidence from Mining Companies in Indonesia

ENDRI ENDRI<sup>1</sup>, APRIYANSYAH MUHAMMAD RIDHO<sup>2</sup>,  
ERI MARLAPA<sup>3</sup> and HERI SUSANTO<sup>4</sup>

<sup>1</sup> Associate Professor, Universitas Mercu Buana, Jakarta, Indonesia; e-mail: endri@mercubuana.ac.id

<sup>2</sup> Graduate Magister Manajemen, Universitas Mercu Buana, Jakarta, Indonesia;

e-mail: apriyansyah.m.ridho@gmail.com

<sup>3</sup> Assistant Professor, Fakultas Ekonomi dan Bisnis, Universitas Mercu Buana, Jakarta, Indonesia;

e-mail: eri.marlapa@mercubuana.ac.id

<sup>4</sup> Assistant Professor Universitas Nusa Bangsa, Bogor, Indonesia; e-mail: heri@unb.ac.id

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#### ABSTRACT

*This study examines the relationship between capital structure and firm performance. The investigation has been performed using panel data procedure for a sample of 42 mining sector Indonesian listed companies on the Indonesian Stock exchange during 2014-2018. The study uses three performance measures which are return on equity (ROE), return on asset (ROA), and earnings per share (EPS) as dependent variable. The five capital structure measure which are debt to asset ratio (DAR), debt to equity ratio (DER), long term debt to total capital (LDTC), long term debt to total equity (LDTE), and growth as independent variable. The results show that DER has no relationship to ROA and EPS while has negative significant to ROE, DAR has a significant negative effect on ROA and EPS while DAR has a significant positive effect on ROE, LDTE has positive significant relationship to ROE while ROA and EPS has no relationship. LDTC has negative significant relationship to return on asset, while ROE and EPS have no relationship. Growth has a significant positive relationship with ROA, ROE, and EPS.*

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#### INTRODUCTION

Increasingly tighter competition in the era of globalization has encouraged companies from various industries to be more competitive in order to maintain their existence. To become a competitive company, the latest strategies and innovations are needed in order to survive in the globalization competition. However, these strategies and innovations require a lot of funds or capital. The need for funds or capital to sustain the strategies and innovations made by the company can be sourced from internal sources of the company that come from net cash flow from operating results and external sources of the company through the issuance of new shares or debt disbursement from creditors from both financial / banking

institutions and bond issuance on the capital market. Optimal capital structure management is able to create strong and stable financial conditions. The mining sector is one of the important sectors in Indonesia because of its role as a provider of energy resources needed in the country's economic growth. However, the mining sector has different characteristics from other sectors. The nature and characteristics of the mining sector are that it requires large investments, long-term, high uncertainties, and high risks that make funding a key issue related to company development.

According to Addae (2013) debt to equity ratio has a significant negative effect on company profitability. This is contrary to research conducted by Endri et al. (2019) which states that the debt to equity ratio had a significant positive effect. According to David and Olorunfemi (2010) and Nassar (2016) which states that DAR had a significant positive effect on company profitability. This contradicts the research which stated by Kipesha and James (2014) and Takeh and Navaprabha (2015) which stated that debt to total assets had a significant negative effect. In a study conducted by Harahap et al. (2020) states that long term debt to total equity has a significant positive effect on financial performance. Research conducted by Ashraf et al. (2017) states that long term debt to total capital has a significant negative effect on financial profitability. While the results of research conducted by Nenu et al. (2018) states that long term debt to total capital has no significant effect on company performance. Study Salim and Yadav (2012) states that growth has a positive effect on the company's financial performance. This is also consistent with study Endri and Fathony (2020) research which states that growth has a positive effect on financial performance.

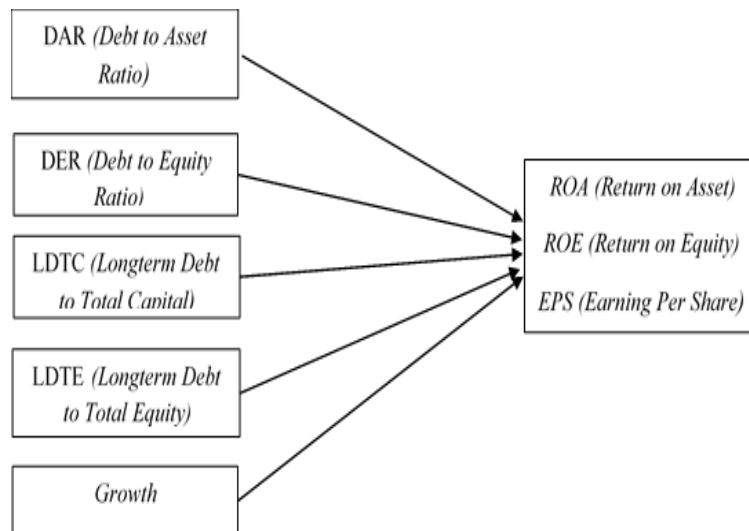
This study aims to empirically examine the relationship between capital structure represented by debt to asset ratio (DAR), debt to equity ratio (DER), long term debt to total capital (LDTC), long term debt to total equity (LDTE), and growth to company profitability such as return on assets (ROA), return on equity (ROE), and earnings per share (EPS) in mining sector companies listed on the Indonesia Stock Exchange in the 2014-2018 period. The relationship between capital structure and company profitability is very important because profitability is needed for the long-term survivability of the company. In addition, the company's profitability is needed as an indicator that the company has good performance.

## 1. LITERATURE REVIEW

Financial performance is the company's financial condition for a certain period which includes the collection and use of funds measured by several indicators of the capital adequacy ratio, liquidity, leverage, solvency, and profitability. According to Shahnia et al. (2020), financial performance is the company's ability to manage and control its resources. Financial performance can measure the overall financial health of a company over a certain period of time and can also be used to compare the conditions of similar companies in the same industry performance. Company profitability is the net result of a number of company policies and decisions. According to Xu (2012) state that profitability is the relationship between revenues and costs generated by using company assets - both current and fixed productive activities. According to Oino and Ukaegbu (2015) capital structure is the choice between debt and equity financing. According to Chen et al. (2019) said that the capital structure is permanent financing consisting of long-term debt, preferred shares, and shareholder capital. Meanwhile, according to Chandra et al. (2019), the capital structure describes the company's permanent financing consisting of long-term debt and own capital.

Various capital structure theories that discuss about how companies should make decisions on capital structure, has been widely discussed by experts. Beginning with a theory by Franco Modigliani and Merton Miller (MM) in 1958 which was later renewed in 1963 by including the tax element (the tax shield) in the use of debt (Nenu et al. 2018). In the second theory, MM suggests that companies should use almost 100% debt in their capital structure. Other capital structure theories are trade-off theory and pecking order theory. According to the trade-off theory revealed by Myers (2001), a company will owe to a certain level of debt, where the tax savings (tax shields) from additional debt equals the cost of financial distress. While the pecking order theory which explains that the company prioritizes internal equity funding (using retained earnings) rather than external equity funding (issuing new shares). This suggests that companies that issue debt bear positive signals about their future prospects conversely, new equity is

issued with the aim of spreading risk among shareholders, so this is the last choice for companies in the acquisition of funds. Through the description above, it can be made a hypothesis taken from this study stating that the capital structure is debt to equity ratio (DER), debt to asset ratio (DAR), long term debt to total capital (LDTC), long term debt to total equity (LDTE) has an influence on profitability variables, namely return on assets (ROA), return on equity (ROE), and earnings per share (EPS) which can be described in the model below:



Source: Author's Model

## 2. RESEARCH METHODS

### 2.1 Data Sample

The sample of this research is mining companies listed on the Indonesia Stock Exchange (BEI) from 2014 to 2018 with a total of 42 companies. We generate our data from sample company's published financial statements. Our panel data approach compares the financial condition of firms from the same industry in Indonesia. Specifically, our data sources are firms' formal websites, the website of the Indonesian Stock Exchange (<http://www.idx.co.id>).

### 2.2 Variable Measurement

The dependent variable is return on asset (ROA), return on equity (ROE), and earnings per share (EPS). The independent variable is debt to asset ratio (DAR), debt to equity ratio, long term debt to total capital (LDTC), long term debt to equity (LDTE), and growth. The measurement of dependent and independent variable in this research as follow:

$$ROA = \frac{\text{Net Income}}{\text{Total Asset}}$$

$$ROE = \frac{\text{Net Income}}{\text{Total Equity}}$$

$$EPS = \frac{\text{Net Income} - \text{Preferred Divident}}{\text{End of Period Common Share Outstanding}}$$

$$DAR = \frac{\text{Total Debt}}{\text{Total Asset}}$$

$$DER = \frac{\text{Total Debt}}{\text{Total Equity}}$$

$$LDTC = \frac{\text{Longterm Debt}}{\text{Longterm Debt} + \text{Total Equity}}$$

$$LDTE = \frac{\text{Longterm Debt}}{\text{Total Equity}}$$

$$\text{Growth} = \frac{\text{Total Asset}_t - \text{Total Asset}_{t-1}}{\text{Total Asset}_{t-1}}$$

## 2.3 Data Analysis Method

In analyzing the data used is descriptive analysis, panel data model analysis, selection of the best model, hypothesis testing (Coefficient of Determination test ( $R^2$ ), F-statistic test and T-statistic test) using Eviews 10 program. Panel data is a combination of cross section data and time series data. The panel data regression model consists of three model in estimating the regression model with panel data, namely Pooled Least Square or commonly using the Ordinary Least Square (OLS), Fixed Effect (FE), and Random Effect (RE) methods. The relationship between capital structure and company profitability is tested with the following regression models:

$$ROA_{it} = \alpha_1 + \beta_{11}DER_{it} + \beta_{12}DAR_{it} + \beta_{13}LDTC_{it} + \beta_{14}LDTE_{it} + \beta_{15}Growth_{it} + \varepsilon_{1it}$$

$$ROE_{it} = \alpha_1 + \beta_{21}DER_{it} + \beta_{22}DAR_{it} + \beta_{23}LDTC_{it} + \beta_{24}LDTE_{it} + \beta_{25}Growth_{it} + \varepsilon_{2it}$$

$$EPS_{it} = \alpha_1 + \beta_{31}DER_{it} + \beta_{32}DAR_{it} + \beta_{33}LDTC_{it} + \beta_{34}LDTE_{it} + \beta_{35}Growth_{it} + \varepsilon_{3it}$$

Notes:

$\alpha$  = a constant

$\beta$  = regression coefficient

$\varepsilon$  = error

## 3. RESULTS AND DISCUSSION

### 3.1. Descriptive Statistics

The descriptive analysis exhibited that the pre-tax return on asset is 7.72%, however, the pre-tax return on equity is 11.48%. The result of Table 1 also exhibited that the value of kurtosis is greater than 3, which showed the non-normality of the data, it is further validated by the Jaque- Bera test results, which showed that the time series data of all the indicators are not normally distributed, thus we have to check the unit root in considered time series.

**Table 1.** Descriptive Analysis

<i>Variable</i>	<i>Mean</i>	<i>Maximum</i>	<i>Minimum</i>	<i>Standard Deviation</i>
ROA	0.011	0.46	-0.72	0.14
ROE	0.117	24.7267	-7.49	1.83
EPS	131.55	3564.24	-780.74	498.66
DER	0.43	34.06	-225	16.25
DAR	0.52	1.98	0	0.34
LDTC	0.36	11.27	-1.23	0.84
LDTE	0.72	23.33	-17.23	2.95
GROWTH	0.02	1.4009	-0.99	0.22

Source: Author's Calculation

Descriptive statistics analysis results obtained the highest DAR ratio of 1.98 and the lowest of 0.00. The lowest DER ratio is -225.0049 and the highest is 34.06. The lowest LDTC ratio is -1.23 and the highest is 11.27. The lowest LDTE ratio is -17,234 and the highest is 23.33. The lowest growth rate of -0.9982 and the highest of 1.4009. The lowest EPS was IDR-780.74 and the highest was IDR3564.24 with an average of IDR131,555 and a standard deviation of IDR498.6644. The lowest ROA is -0.72 and the highest is 0.46 with an average of 0.011 and a standard deviation of 0.141263. The lowest ROE is -7.49 and the highest is 24.7267 with an average of 0.1179 and standard deviation of 1.83004.

### 3.2 Selection of the Regression Model

To choose right model panel for dependent variable ROA ROE and EPS, we need several test of panel data, such as Chow Test, Hausman Test, and the Lagrange Multiplier test. The following are the results of the Chow Test, the Hausman Test, and the Lagrange Multiplier test for the variables ROA, ROE, and EPS.

From the test results above, it can be seen the right model for the panel data with dependent variable ROA, ROE, and EPS. For ROA and EPS use random effect model while ROE uses the common effect model. On the table above, the results of the Chow test on the variables ROA, ROE, and EPS show probability of 0, 0.0470, and 0. The results of these probabilities can be seen that the hypothesis model has a cross section because F-probability value smaller than  $\alpha$  (5%), which is  $0.00 < 0.05$  then  $H_0$  is rejected. The right model for variable ROA, ROE, and EPS is fixed effect model.

**Table 2.** Panel Data Test Result

<i>Model</i>	<i>ROA</i>	<i>ROE</i>	<i>EPS</i>
Chow Test:			
F-Statistics	3.47404	1.474	8.583
Probability	0	0.047	0
Hausman Test:			
Chi-Sq. Statistic	7.76135	7.841386	0.6732
Probability	0.1699	0.1652	0.9844
Lagrange Multiplier Test:			
Breusch-Pagan	42.9317	2.997553	151.698
Probability	0	0.0834	0
Result	Random Effect Model	Common Effect Model	Random Effect Model

Source: Author's Calculation

Then, dependent variable will be tested using the Hausman test to determine whether fixed effect model or random effect model is right. From the table above, the Hausman test results show Chi-Square probability statistics are 0.1699, 0.1652 and 0.9844. The results of these probabilities show that the hypothesis model has Chi-Square probability value greater than  $\alpha$  (5%) which is  $0.00 > 0.05$  then  $H_0$  is rejected. The model that is suitable for the panel data regression model is random effect model for ROA, ROE, and EPS. Then, data panel model will be tested using the Lagrange Multiplier test to determine whether a random effect model or common effect model is right. From the table above, show that Breusch-Pagan probabilities of 0, -0.0834, and 0. The results of these probabilities can be seen that the hypothesis model has Breusch-Pagan probability value smaller than  $\alpha$  (5%) which is  $0.00 < 0.05$  for ROA and EPS then  $H_0$  is rejected. The result is variable ROA and EPS using random effects model as the right model for panel data regression in the study. As for variable ROE, the probability value is greater  $\alpha$  (5%), namely  $0.0834 > 0.05$ . So that variable ROE using common effect model as the right model for panel data regression.

In selecting a variable, it is said to be significant if the variable has a real influence on other variables. The more significant independent variables in a model, the better the model is than the other models.

**Table 3.** Panel Data Regression Result

<i>Independent Variabel</i>	<i>Dependent Variabel</i>		
	ROA	ROE	EPS
<b>Coefficient</b>			
Coefficient	0.079211	-0.04779	253.175
t-stat	3.494727	-0.61258	2.653896
Prob (t-stat)	0.0006	0.5408	0.0086
<b>DAR</b>			
Coefficient	-0.16260	0.36365	-272.4678
t-stat	-4.57383	2.65209	-2.054185
Prob (t-stat)	0	0.0086	0.0412
<b>DER</b>			
Coefficient	6.35E-06	-0.10797	0.021235
t-stat	0.126402	-39.8835	0.01425
Prob (t-stat)	0.8995	0	0.9886
<b>LDTC</b>			
Coefficient	0.035608	-0.11266	18.56428
t-stat	3.512116	-2.00464	0.625766
Prob (t-stat)	0.0005	0.0463	0.5322
<b>LDTE</b>			
Coefficient	0.000252	0.0683	2.684299
t-stat	0.08706	4.59926	0.305
Prob (t-stat)	0.9307	0	0.7604
<b>Growth</b>			
Coefficient	0.146633	0.516615	448.2749
t-stat	3.816852	2.693511	3.845736
Prob (t-stat)	0.0002	0.0077	0.0002
<b>Number of Observation</b>	210	210	210
<b>R-Square</b>	0.180374	0.892081	0.096711
<b>Adj-R-Square</b>	0.160285	0.889436	0.074572
<b>F-Statistic</b>	8.978783	337.2605	4.368266
<b>Prob (F-Statistic)</b>	0	0	0.000846

Source: Author's Calculation

After selecting panel data regression model using Chow test, Hausman test, and the Lagrange Multiplier test, it was found that for the ROA and EPS variables, the best panel data regression model is the random effect model. As for the ROE variable, the best model is the common effect.

The random effect model equation for the ROA and EPS variables is as follows:

$$\text{ROA} = 0.0792 - 0.1626 * \text{DAR} + 0.000063 * \text{DER} + 0.0356 * \text{LDTC} + 0.0002 * \text{LDTE} + 0.1466 * \text{GROWTH}$$

$$\text{F-Statistic} = 8.978783$$

$$\text{Prob (F-Statistic)} = 0$$

The random effect model equation for the ROA and EPS variables is as follows:

$$\text{EPS} = 253.174955604 - 272.467813857 * \text{DAR} + 0.021234962894 * \text{DER} + 18.5642755109 * \text{LDTC} + 2.68429867707 * \text{LDTE} + 448.274940963 * \text{GROWTH}$$

$$\text{F-Statistic} = 4.368266$$

$$\text{Prob (F-Statistic)} = 0.000846$$

Whereas the common effect model equation for the ROE variable is as follows:

$$\text{ROE} = -0.047794 + 0.363652 * \text{DAR} - 0.107967 * \text{DER} - 0.112660 * \text{LDTC} + 0.068301 * \text{LDTE} + 0.516615 * \text{GROWTH}$$

$$\text{F-Statistic} = 337.2605$$

$$\text{Prob (F-Statistic)} = 0$$

Then the regression model of panel data regression ROA, ROE, and EPS will use the F-test and the coefficient determination. The F-test is used to determine whether the regression model is correct about the profitability represented by the variable ROA, ROE, EPS and capital structure represented by the DAR, DER, LDTC, LDTE, and variable growth variables. Meanwhile, the coefficient of determination is used to determine the contribution of the independent variable to the dependent variable.

In table 3, the F-test results for the dependent variables ROA, ROE, and EPS are 8.978783, 337.2605, 4.368266, respectively, with prob. (F-statistics) 0, 0.000846, and 0. From these results we can find the possibility of F-statistics for ROA, ROE, and EPS variables smaller than  $\alpha$  (5%), or 0, 0,000846, and 0,  $H_0$  is rejected.

Thus, the regression model is correct and can be used to predict the profitability of companies using the variable ROA, ROE, and EPS, or can support the increase or decrease in corporate profitability by DAR, DER, LDTE, LDTC, and growth. In table 3, the results of the coefficient determination (R-Square) model of panel data regression ROA, ROE, and EPS as follows 0.180374, 0.892081, 0.096711.

This means that the dependent variable 18.0374% ROA, 89.2081% ROE, and 9.6711% EPS can be explained by the independent variables DAR, DER, LDTC, LDTE, and growth, while the rest are 81.9626% ROA, 10.7919% ROE, and 90.3289% EPS required by the other factors which is not used in the models.

### 3.3 Effect of DAR on Company Profitability in the Mining Sector

Based on the results from Table 3, it can be seen that the DAR coefficient value moves negatively for the dependent variable ROA, EPS and moves positively on the dependent variable ROE. DAR coefficient values for the dependent variables ROA, ROE, and EPS are -0.162603, 0.36365, and -272.4678. The t-statistic value is -4.573831, 2.65209, and -2.054185, and the probability value is 0.000, 0.0086, and 0.0412. From these probability values, it can be seen that for the dependent variables ROA and EPS, DAR has a significant negative effect because the probability values are 0,000 and 0.0412 or smaller than 0.05. For the ROE variable, DAR has a significant positive effect because the probability value is 0.0086 smaller than  $\alpha$  (5%).

The result of significant negative effect of DAR on company profitability shows that if DAR is low then profit rises. This significant negative effect on ROA and EPS is consistent with the Pecking Order theory which states that companies that have high profitability have a low level of debt. For dependent variable ROE, DAR has a significant positive effect on DAR. This result is in accordance with the tradeoff theory which states that by increasing its debt, a company can increase its profitability to reduce its taxes. This contradicts the theories of Modigliani and Miller (1958 and 1963), which states that the profitability of companies does not depend on the structure of capital. Significant negative effect of DAR variables on the dependent variable ROA and EPS in accordance with previous research from Chinaemerem and Anthony (2012) and Ashraf et al. (2017) which states that DAR has a significant negative effect on company profitability. Significant positive effect of DAR variables on ROE variables in accordance with research Sultan and Adam (2015), and Alhassan (2017) which states that the DAR variable has a significant positive effect on company profitability.

### 3.4 Effect of DER on Company Profitability in the Mining Sector

Based on the results in table 4 it can be seen that DER coefficient value moves negatively for the dependent variable ROE, while the DER moves positively for the variable ROA and EPS. DER coefficient values on the dependent variable ROA, ROE, and EPS are 0.0000635, -0.107967, and 0.021235. For t-statistics values of 0.126402, -39.88352, and 0.014250. The probability value is 0.8995, 0.000, and 0.9886. From the probability value, it can be seen that for the dependent variable ROA and EPS, the DER variable has no significant effect because the probability value is the probability value of 0.8995 and 0.9886 or greater than  $\alpha$  (5%). As for the dependent variable ROE, DER variable has a significant negative effect.

There is no effect on profitability in accordance with previous research from Degryse et al. (2012) which states that DER variable has no effect on company profitability. However, DER variable has a significant negative effect on profitability for the dependent variable ROE. This finding is consistent with the pecking order theory which shows that leverage has a negative effect on company profitability because a high level of debt reduces the company's financial profitability. Significantly negative results of DER on ROE indicate that the lower the DER, the higher the ROE. So from the results of this study it can be seen that mining sector companies listed on the Indonesia Stock Exchange in 2014-2018 use more debt than Equity. Significant negative effect of DER variables on ROE variables in accordance with research conducted by Abrar and Javaid (2016), Alhassan and Erasmus (2017) and Mihaela and Claudia (2017), while empirical findings Nwude and Anyalechi (2017) and Hashim and Hassan (2017) which stated that DER had a significant negative effect on company profitability. This result is contrary to the research of Sultan and Adam (2015), and Taani (2013) which states that DER has a significant positive effect on company profitability on the ROE variable.

### 3.5 Effect of LDTC on Company Profitability in the Mining Sector

Based on the results from Table 3, it can be seen that the LDTC coefficient value moves positively for the dependent variables ROA, and EPS. However, LDTC moves negatively on the ROE variable. LDTC coefficient values on the dependent variable ROA, ROE, and EPS are 0.035608, -0.11266, 18.56428. The t-statistic value is 3.512116, -2.004641, and 0.625766. The probability values are 0.0753, 0.0463, and 0.5322. From the probability value, it can be seen that for dependent variable ROA, LDTC has a significant positive effect because the probability value is 0.0005 or smaller than  $\alpha$  (5%). For the LDTC ROE variable significant negative effect because the probability value is 0.0463 or smaller than  $\alpha$  (5%). As for the EPS variable, LDT has no significant effect because the probability value is 0.5322 or greater than  $\alpha$  (5%).

The LDTC variable has a significant positive effect on the ROA variable. However, LDTC has a significant negative effect on the ROE variable and has no effect on the EPS dependent variable. These results indicate that in mining sector companies, the higher LDTC ratio, the higher ROA. Conversely, if the LDTC ratio is high then ROE decreases. The effect of LDTC which has a significant negative effect on ROE vari-



ables in accordance with the research of Ashraf (2017), and Alhassan and Erasmus (2017) which states that LDTC has an effect significant negative effect on the Company's profitability. However, according to Shahniah et al. (2020) stated that LDTC has a positive effect on company profitability. LDTC ratio has no effect on com

pany profitability according to research conducted by Tailab (2014) states that LDTC has no effect on company profitability.

### 3.6 Effect of LDTE on Company Profitability in the Mining Sector

Based on the results from Table 3, it can be seen that LDTE coefficient values move positively for ROA, ROE, and EPS. LDTE coefficient values on the dependent variable ROA, ROE, and EPS are 0.000252, 0.06830, and 2.684299. For t-statistic values of 0.08706, 4.59926, and 0.305395. The probability values are 0.9307, 0.0000, and 0.7604. From the probability value, it can be seen that for the dependent variable ROE, LDTE has a significant positive effect because the probability value is 0.0000 or smaller than  $\alpha$  (5%). For ROA and EPS variables, LDTE has no significant effect because the probability values are 0.9307 and 0.7604 greater than  $\alpha$  (5%).

LDTE variable has a significant positive effect on ROE variables. However, LDTE has no effect on ROA and EPS variables. In the mining sector, the LDTE ratio has a significant positive effect on ROE, so the high LDTE ratio affects the high profitability of the company. From these results it can reinforce the previous statement that mining sector companies listed on the Indonesia Stock Exchange use debt rather than equity. The positive effect of the LDTE variable on firm profitability is different from the research findings of Endri et al. (2019) which proves that LDTE has a negative effect on company profitability. However, different results were obtained from the research of Addae (2013), Ahmad (2014) and Kipe-sha and James (2014) who stated that LDTE had a significant negative effect on company profitability. Meanwhile according to Chivandire et al. (2019) states that LDTE has no effect on company profitability.

### 3.7 Effect of Growth on Company Profitability in the Mining Sector

Based on the results from Table 3, it can be seen that the Growth coefficient values move positively for the three dependent variables ROA, ROE, and EPS. Growth coefficient values on the dependent variable ROA, ROE, and EPS are 0.146633, 0.516615, and 448.2749. For t-statistics values of 3.816852, -2.693511, and 3.845736. The probability value is 0.0002, 0.00770, and 0.0002. From these probability values, it can be seen that for dependent variables ROA, ROE, and EPS, Growth has a significant positive effect because the probability values are 0.0002, 0.0342, and 0.0002 or smaller than  $\alpha$  (5%). Growth variable has a significant positive effect on the profitability of mining sector companies listed on the Indonesia Stock Exchange in 2014-2018. The positive influence of the Growth variable is in accordance with the research of Salim and Yadav (2012), and Fajaria and Isnalita (2018) effect on the profitability of the Company. While research conducted by Chivandire et al. (2019) states that growth has no effect on the profitability of companies on the Indonesia Stock Exchange in 2014-2018.

The result of significant negative effect of DAR on company profitability shows that if DAR is low then profit rises. This significant negative effect on ROA and EPS is consistent with the Pecking Order theory which states that companies that have high profitability have a low level of debt. For dependent variable ROE, DAR has a significant positive effect on DAR. This result is in accordance with the tradeoff theory which states that by increasing its debt, a company can increase its profitability to reduce its taxes. This contradicts the theories of Modigliani and Miller, which states that the profitability of companies does not depend on the structure of capital. Significant negative effect of DAR variables on the dependent variable ROA and EPS in accordance with previous research from Chinaemerem and Anthony (2012) and Ashraf et al. (2017) which states that DAR has a significant negative effect on company profitability. The DAR variable has a positive effect on the ROE variable in line with the research of Sultan and Adam (2015) and Alhassan and Erasmus (2017) which prove that the DAR variable has a positive effect on company profitability.

### 3.9 Effect of DER on Company Profitability in the Mining Sector

Based on the results in table 4 it can be seen that DER coefficient value moves negatively for the dependent variable ROE, while the DER moves positively for the variable ROA and EPS. DER coefficient values on the dependent variable ROA, ROE, and EPS are 0.0000635, -0.107967, and 0.021235. For t-statistics values of 0.126402, -39.88352, and 0.014250. The probability value is 0.8995, 0.000, and 0.9886. From the probability value, it can be seen that for the dependent variable ROA and EPS, the DER variable has no significant effect because the probability value is the probability value of 0.8995 and 0.9886 or greater than  $\alpha$  (5%). As for the dependent variable ROE, DER variable has a significant negative effect.

There is no effect on profitability in accordance with previous research from Degryse et al. (2012) which states that DER variable has no effect on company profitability. However, DER variable has a significant negative effect on profitability for the dependent variable ROE. This finding is consistent with the pecking order theory which shows that leverage has a negative effect on company profitability because a high level of debt reduces the company's financial profitability. Significantly negative results of DER on ROE indicate that the lower the DER, the higher the ROE. So from the results of this study it can be seen that mining sector companies listed on the Indonesia Stock Exchange in 2014-2018 use more debt than Equity. Significant negative effect of DER variables on ROE variables in accordance with research conducted by Abrar and Javaid (2016), Alhassan and Erasmus (2017) and Mihaela and Claudia (2017), while finding from Nwude and Anyalechi (2017) and Hashim and Hassan (2017) which stated that DER had a significant negative effect on company profitability. This result is contrary to the research of Sultan and Adam (2015), Taani (2013) which states that DER has a significant positive effect on company profitability on the ROE variable.

### 3.10 Effect of LDTC on Company Profitability in the Mining Sector

Based on the results from Table 3, it can be seen that the LDTC coefficient value moves positively for the dependent variables ROA, and EPS. However, LDTC moves negatively on the ROE variable. LDTC coefficient values on the dependent variable ROA, ROE, and EPS are 0.035608, -0.11266, 18.56428. The t-statistic value is 3.512116, -2.004641, and 0.625766. The probability values are 0.0753, 0.0463, and 0.5322. From the probability value, it can be seen that for dependent variable ROA, LDTC has a significant positive effect because the probability value is 0.0005 or smaller than  $\alpha$  (5%). For the LDTC ROE variable significant negative effect because the probability value is 0.0463 or smaller than  $\alpha$  (5%). As for the EPS variable, LDT has no significant effect because the probability value is 0.5322 or greater than  $\alpha$  (5%).

## CONCLUSION

During period 2014-2018, the most profitable mining sector companies were those who maintained a high proportion of debt in their capital mix, avoiding shareholder equity. DER ratio (Debt to Equity Ratio) has no effect on ROA and EPS variables. However, the DER (Debt to Equity Ratio) ratio has a significant negative effect on the ROE variable. DAR ratio (Debt to Asset Ratio) ratio has a significant negative effect on the dependent variable ROA and EPS. But on the contrary the DAR ratio (Debt to Asset Ratio) has a significant positive effect on the dependent variable ROE. The LDTE (Longterm Debt to Total Equity) ratio has a significant positive effect on the profitability of mining sector companies listed on the Indonesia Stock Exchange in the 2014-2018 period on the ROE variable. While dependent variable ROA and EPS have no effect. The LDTC (Longterm Debt to Total Capital) ratio has a significant negative effect on the profitability of mining sector companies listed on the Indonesia Stock Exchange in the 2014-2018 period on the ROA variable, while it has no effect on the ROE and EPS variables. Growth (company growth) has a significant positive effect on ROA, ROE, and EPS variables. So it can be concluded that, if the positive growth variable will increase the profitability of mining sector companies listed on the Indonesia Stock Exchange in the 2014-2018 period.

For a better understanding of how capital structure and growth affect the profitability of mining sector companies listed on the Indonesia Stock Exchange, future research must refer to various performance indicators. In addition, other variables must be identified to better explain the variation in returns on equity.

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