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**PENGARUH STRUKTUR MODAL TERHADAP KINERJA KEUANGAN PERUSAHAAN TELEKOMUNIKASI YANG TERDAFTAR DI BURSA EFEK INDONESIA***CAPITAL STRUCTURE EFFECT ON FINANCIAL PERFORMANCE OF TELECOMMUNICATION COMPANIES LISTED IN INDONESIA STOCK EXCHANGE.*

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**Abstrak:** Industri telekomunikasi berkembang pesat di Indonesia baik dalam kompetisi maupun teknologi. Meski ada banyak peluang, sebagian besar perusahaan telekomunikasi Indonesia menunjukkan kinerja keuangan yang lemah. Salah satu strategi untuk mendongkrak kinerja keuangan adalah dengan mengatur tingkat hutang yang digunakan sebagai modal. Penelitian ini dilakukan dengan tujuan untuk mengetahui sejauh mana dampak struktur modal terhadap kinerja keuangan industri telekomunikasi di Indonesia. Struktur modal diukur dengan debt to asset ratio (DAR) dan debt to equity ratio (DER) dan kinerja diukur return on asset (ROA). Semua perusahaan telekomunikasi yang terdaftar di Bursa Efek Indonesia termasuk dalam populasi penelitian ini. Untuk mengetahui sampel, metode purposive sampling digunakan dan terpilih 4 perusahaan telekomunikasi yang memenuhi kriteria dan terdapat 39 data observasi setelah mengeluarkan 1 data outlier. Untuk menguji hipotesis pada penelitian ini, digunakan analisis regresi berganda. Model regresi ini mampu menjelaskan ROA sebesar 61% yang dinyatakan oleh nilai  $R^2$ , dan untuk hasilnya, DAR terbukti berpengaruh negatif dan signifikan terhadap return on asset. Sementara DER menunjukkan efek negatif namun tidak signifikan terhadap return on asset.

**Kata Kunci:** struktur modal, kinerja keuangan, dar, der, roa..

**Abstract:** Telecommunication industry is growing rapidly in Indonesia in both competition and technology. Despite the abundance opportunity, most of Indonesian telecommunication companies shows weak financial performance. One of the strategies to boost the financial performance is by manage the level of debt used as capital. This research is conducted with the aim to see how far is the impact of capital structure towards financial performance in Indonesian telecommunication industry. The capital structure is measured by debt to asset ratio (DAR) and debt to equity ratio (ER). Performance is measured return on asset (ROA). All telecommunication companies that listed in Indonesia Stock Exchange are included in the population of this research. To determine the sample, purposive sampling method is used and telecommunication companies that meet the criteria has chosen and provide 39 data after removing 1 data outliers. This research used multiple regression analysis to test the hypotheses. This model of regression is able to explain ROA by 61% stated by the  $R^2$  value, and as for the results, DAR proven to have negative and significant effect towards return on asset. While DER shows negative but insignificant effect on return on asset.

**Keywords:** capital structure, debt financing, dar, der, roa, financial performance.

## INTRODUCTION

### Research Background

Indonesia's telecommunications industry is experiencing rapid growth and change in recent years. It was reported in the annual report of PT. Telekomunikasi Indonesia, Tbk that the development of the telecommunications industry is at the level of 9% in 2015. Its growth continues and resulted to increasing number of cellular subscribers which according to Ericsson Mobility Report Q3 2016, Indonesia is in the third position of countries with the largest increase in cellular subscribers as many as 6 million new customers. Despite of the rapid growth in market and the abundance opportunity, most of the companies' financial performance shows fluctuating performance.

With the existence of this phenomenon, service providers are required to have the right financial strategy to maintain their financial performance to attract investors and to be able to generate profit for shareholders. One of the strategies that could be use is by selecting the right capital structure policy. Capital is invested with the aim to create profits and increase wealth for business owners. The capital source can be derived from the company's own capital (equity) or borrowing (debt). Funding from retained earnings is considered as the easiest alternative to funding, but the number is limited and can reduce the number of dividends paid to shareholders. Debt financing can be an alternative when retained earnings are not sufficient to finance the company's activities.

Refers to the research conducted by Sorana Vatavu (2015), Farida Khanam, Shagufta Nasreen, & Syed Shahzaib Pirzada (2014), and Ibrahim Dahiru (2016) on the effect of capital structure to the indicated financial performance, researcher proposed to conduct this research in order to analyze the capital structure management, measure the impact of capital structure towards financial performance and obtain findings that will be benefited in selecting the capital structure to achieve the optimum level of company's profitability, also to re-examine the correlation between the variables that have been analyzed in previous research.

### Research Objectives

1. Determine if there is a significant effect of debt to asset ratio and debt to equity ratio on return on asset simultaneously.
2. Determine if there is a significant effect of debt to asset ratio on return on asset partially.
3. Determine if there is significant effect of debt to equity ratio on return on asset partially.

## THEORITICAL REVIEW

### Financial Performance

Generating profit is the object of a company's business operations. Company's profit as the direct result of managing various economic resources and their efficiency in operational, investment and financing activities (Burja, 2011). Financial performance can be measure by market-based measure and accounting-based measure. Accounting-based view assess the financial performance of companies based on the internal financial condition without taking into account the external factors and measurement used in measuring the financial performance based on accounting-based measure according to Venkatraman (1986) is sales growth, profitability, return on assets (ROA), return on equity (ROE), and earnings per share (EPS). one of the most important goals in measuring the financial performance is to determine whether goals set have been achieved so that the interests of the company shareholders can be fulfilled. Assess financial performance is also capable of influencing corporate decision-making.

### Return on Assets

Return on assets ratio measure the profitability of a company to its' total assets. ROA indicates the ability of managers to use company's asset in generating profit. The higher the return, then managers' utilization of company's assets considered more efficient. ROA is the result of the comparison (in percentage) of net income to total assets. Some analysts calculate ROA using operating income instead of net income.

### Capital Structure

Many researchers both from abroad and within the country express their opinions about the definition of capital structure. In 2001, Damodaran through "Corporate Finance: Theory and Practice" defined capital structure as the composition of debt and equities to budget the company's operational. Gajurel (2005) proposed

that capital structure is a different source of funds that make up a firm's capital, and according to Abor (2005) it is a particular blend of debt and equity a firm uses to finance its' operations. All definitions that provide above share the same meaning that capital structure consist of debt and equity that used to finance the operation within the company. Debt financing is still being observed by many researchers aiming to determine optimum levels of debt financing that will minimize the cost of capital and increase the value of the company.

### **Debt to Asset Ratio**

Debt to asset ratio is a ratio that measures the capital structure and the leverage degree of a company. This ratio gives a picture of a company's capital structure by showing how much debt that used to finance the asset of companies. The smaller the amount of this ratio in means fewer debt contained in company's total capital and that condition is an advantage for the company because those companies will be considered to have a smaller risk of financial distress.

### **Debt to Equity Ratio**

Debt to Equity ratio represents how much company used the fund obtained through debt when compared to the fund obtained through its capital. Companies' assets are purchased with debt and equity, companies that use more debt than equity to finance assets have higher leverage ratio while companies that pay for assets with more equity than debt has lower leverage ratio.

### **Modigliani & Miller Theorem**

The assumption in MM theory stated that, capital structure was not relevant and despite changes in the way companies finance their operations will not change the total risk for investors. This first theory is based on the perfect market condition with the characteristic of no tax impact, inflation and transaction costs associated with raising money or going bankrupt. In 1963, heave in sight the second MM theory (MMII). In MMII, Modigliani and Miller considering tax impacts on building company's capital structure. As a result, the theory MMII advised the company to use debt as much as possible in funding business operations. This is based on their belief that, with the interest on the debt will reduce the tax amount and thus will increase the value of companies because the net cash obtained, after tax payment, by a firm could be increased.

### **Static Trade-Off Theory**

This theory has considered the presence of taxes, bankruptcy and agency costs. By considering the three elements of inefficient market, the trade-off theory suggests that the company may benefit through trade-off costs with the advantage of debt (Kraus and Litzenberger, 1973). This theory believes that there are advantages for the company finances operations with debts which is the tax benefit as proposed in the MM theory. Along, there are also costs to be borne as the result of the company financing with debt. This theory predicts a positive correlation between capital structure and profitability if the company is able to ensure that the benefits arise from debt is still greater than the cost to be borne because of the debt.

### **Pecking Order Theory**

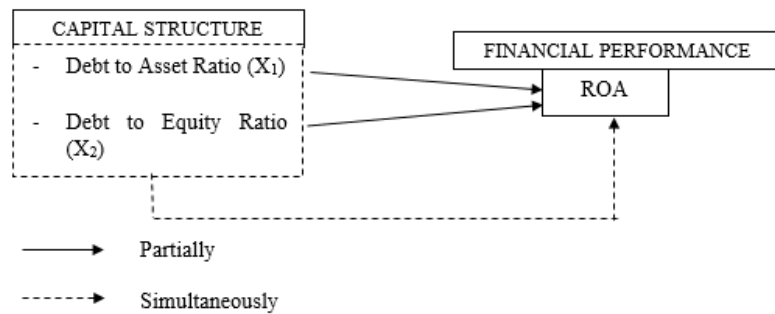
This theory was popularized and developed by Myers and Majluf (1984). They suggested through the pecking order theory that managers, in financing its business operations should consider the order in selecting fund sources. Managers should prioritize the use of retained earnings, then debt, and then equity. Managers are advised to use company's internal funds first and after if the internal funds not able to fund the operations, then the manager is allowed to choose debt to support the financing. Then, when the debt was not a wise choice anymore the last option is to use equity by issuing shares to external parties. This is because, the pecking order theory considered that the costs incurred for issuing long-term debt is less than the cost of issuing new share.

### **Previous Research**

Sorana Vatavu (2015) use regression analysis to see the relation between capital structure and financial performance of Romanian listed companies. The result of this study stated that long-term debt and total debt to asset ratio shows negative relationship with the dependent variable. Khanam et al. (2014) also investigated the capital structure impact on financial performance. Taking 49 firms in food sector listed at Karachi stock exchange and used six-year data from 2007-2012. Through multiple regression analysis, resulted in a statistically significant and adverse relationship between determinants of capital structure with the performance

of firms in food sector of Pakistan. **Ibrahim Dahiru (2016)**, research about this topic and used Total Debt to Total Asset, Total Debt to Equity, Short Term debt to total Asset and Long-Term Debt to Total Asset as independent variables without any control variable. The study used a sample of 31 manufacturing firms in Nigeria during the period of 2009-2014. The outcome of this study revealed that there is a negative relationship between capital structure proxies which is total debt to total asset and long-term debt to total asset with the financial performance and indicate that the p-value is statistically significant at 5%.

**Conceptual Framework**



**Figure 1. Conceptual Framework**

**Hypotheses**

Based on the theory explained above and the results shown in previous research this research is conducted with hypotheses as follows:

- H1: Debt to Asset Ratio and Debt to Equity Ratio have a significant simultaneous effect on Return on Asset of telecommunication companies listed in Indonesia stock exchange.
- H2: Debt to Asset Ratio has a significant partial effect on Return on Asset of telecommunication companies listed in Indonesia stock exchange.
- H3: Debt to Equity Ratio has a significant partial effect on Return on Asset of telecommunication companies listed in Indonesia stock exchange.

**RESEARCH METHOD**

**Type of Research**

This study is a causal research that analyzing the effect of one variable against another. The causal research design provides researcher the opportunity to examine the relationship between independent variables and their influence on dependent variables.

**Research Variables and Operational Definition**

**Table 1. Research Variables and Operational Definition**

No	Variable	Operational Definition	Formula
1.	Return on Asset	As a measure to examine how companies can generate profit from the asset.	$= \frac{\text{Net Income Before Tax}}{\text{Total Asset}}$
2.	Debt to Asset Ratio	As a measure to examine how much debt is used as a component that finances the asset.	$= \frac{\text{Total Debts}}{\text{Total Assets}}$
3.	Debt to Equity Ratio	As a measure to examine how much debt is used to finance the company compared to its equity.	$= \frac{\text{Total Equity}}{\text{Total Assets}}$

**Population and Sample**

Population is generalization region consist of objects or subjects that have specific qualities and characteristics defined by the researchers to learn and then drawn conclusions (Sugiyono, 2015: 135). In this study, the population is all telecommunication companies that listed in Indonesia Stock Exchange. From the population, the researchers take the sample with purposive sampling method. Based on these criteria obtained PT. Telekomunikasi Indonesia, Tbk., PT. XL Axiata, Tbk., PT. Indosat, Tbk., PT. Smartfren Telecom, Tbk., as



samples and by analyzing the annual reports of each company from 2007 – 2016, the total number of observations is 40 observations.

**Data Collection Method**

Data used in this study is quantitative secondary data. Data required in this study is provided in the financial statements of PT. Telekomunikasi Indonesia, Tbk., PT. XL Axiata, Tbk., PT. Indosat, Tbk., PT. Smartfren Telecom, Tbk., which can be obtained from the annual reports released. The annual report can be accessed from the company's official website or can be downloaded from [www.idx.co.id](http://www.idx.co.id). Relates to Sugiyono (2010: 137) in secondary data, the data source does not directly provide data to data collectors, but through others or through documents. As well as the data in this study which derived from annual reports of companies mentioned above. The annual report has been prepared by the company and the researcher only analyzing the data included in the report.

**Research Model and Analysis**

**Classical Assumption Test**

In the use of multiple regression model, hypothesis testing should avoid the possibility of deviation assumptions classic. According to Gujarati (1995), the classical assumptions that are considered most significant are:

1. It has a normal distribution,
2. There was no Multicollinearity between the independent variables,
3. There was no Heteroskedasticity or constant variant confounding variables (Homoscedasticity),
4. There was no autocorrelation between the residuals of each independent variable.

**Multiple Regression Model**

In analyzing the data in this study, multiple regression is used to see the relationship between capital structure with the profitability of telecommunication companies in Indonesia. Regression models that formulated for the necessity of the research are:

$$Y = \alpha + \beta_1 \text{DAR} + \beta_2 \text{DER} + e$$

Where:

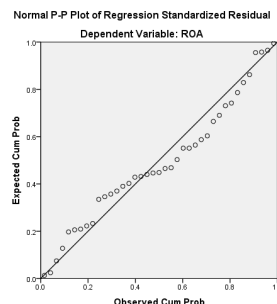
- Y : ROA
- $\alpha$  : Intercept
- $\beta_1$  : The slope of DAR
- $\beta_2$  : The slope of DER
- DR : Value of debt asset ratio
- ER : Value of debt equity ratio
- e : error term

**RESULTS AND DISCUSSIONS**

**Result of Classical Assumption Test**

**Normality Result**

**Figure 2. Normality Result**



Source: Data Processed 2017

By looking at the figures above, it can be concluded that the model of regression had passed the normality test because the dots on the figure shows a pattern that is respectively moving around the diagonal axis and following the diagonal axis. Therefore, the regression model has passed the normality test.

**Multicollinearity Result**

**Table 2. Multicollinearity Result Tolerance and VIF Value**

	Tolerance	VIF
1 (Constant)		
DAR	.181	5.520
DER	.181	5.520

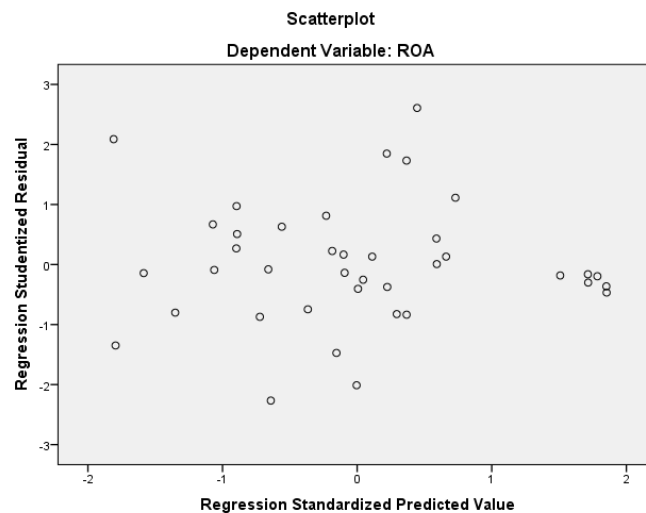
Source: Data Processed (2017)

There is no multicollinearity in the regression models, as the tolerance value is more than 0.1 and VIF value below 10. Thus, the analysis can be continued because no multicollinearity problem were detected in the models.

**Heteroscedasticity Result**

Below shown the result of heteroscedasticity test. The scatterplots confirmed that there is no heteroscedasticity problem in this regression models because the dots are spread randomly above and below 0 in y-axis.

**Figure 3. Heteroscedasticity Result**



Source: Data Processed (2017)

**Autocorrelation Result**

**Table 3. Autocorrelation Result**

Durbin-Watson
<b>2.130</b>

Source: Data Processed (2017)

The result of autocorrelation test by Durbin-Watson shows that dW in 2.130 points is more than the dU value (1.6575) and less than 4-dU value (2.3425). This model has passed all the classical assumption test and may be continued.

### Multiple Regression Result

**Table 4. Result of Multiple Regression Analysis**

Model	Unstandardized Coefficients		Standardize d Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	52.340	11.646		4.494	.000
DAR	-70.108	25.588	-.663	-2.740	.010
DER	-1.405	2.559	-.133	-.549	.586

Dependent Variable: ROA

Source: Data Processed (2017)

The multiple regression based on the analysis result is as follows:

$$Y = 52.340 - 70.108X_1 - 1.405X_2 + e$$

Where:

- Y = Return on Asset  
 $X_1$  = Value of Debt Asset Ratio (DAR)  
 $X_2$  = Value of Debt Equity Ratio (DER)  
 e = Error Term

Based on the equation, the value of constant ( $\alpha$ ) is 52.340 which explains that if the value of all independent variables is zero or when ROA is not affected by DAR and DER, then the value of dependent variable which in this case ROA is predicted to be 52.340. DAR has a negative effect on ROA which shows by the negative sign in the equation, hence the result above indicates that if other independent variables are constants, an increase of one point in DAR will result in a decrease of 70.108 in ROA. The regression coefficient of DER also shows a negative sign; it means if the other independent variables are equal to zero, an increase of one point in DER will decrease the value of ROA by 1.405.

### Coefficient of Determination Result

**Table 5. Coefficient of Determination**

Y	R	R Square	Adjusted R Square	Std. Error of the Estimate
ROA	.786 <sup>a</sup>	.618	.596	8.693265%

a. Predictors: (Constant), DER, DAR

b. Dependent Variable: ROA

Source: Data Processed (2017)

The coefficient of correlation (R) is 0.786. Therefore the independent variables and dependent variable are strongly associated. The output above also shows that the value of the coefficient of determination ( $R^2$ ) between the independent variables and the dependent variable is 0.618. It means that this model is able to explain ROA for 61%, and the other 39% is explained by other factors that are not discussed in this research.

### Hypothesis Testing Results

#### F – Statistic Test Result

The result shows that F-count > F-table (29.067 > 3.26) and sig < 0.05. Therefore, H1 that states that debt to asset ratio and debt to equity ratio has simultaneous effect on return on asset of telecommunication companies listed in Indonesia stock exchange is accepted.

**Table 6. F- Statistic Results**

Model	F	Sig	Conclusion
1 Regression	29.067	.000b	Significant
Residual			
Total			

a. Dependent Variable: ROA

Source: Data Processed (2017)

b. Predictors: (Constant), DAR, DER

**t – Statistic Test Result****Table 7. t- Statistic Results**

Model		Unstandardized		Standardized	t	Sig.
		Coefficients		Coefficients		
a.		B	Std. Error	Beta		
1	(Constant)	52.340	11.646		4.494	.000
	DAR	-70.108	25.588	-.663	-2.740	.010
	DER	-1.405	2.559	-.133	-.549	.586

Dependent Variable: ROA

Source: Data Processed (2017)

With the level of significance in 0.05 the table above is explained as follows:

1. Debt to asset ratio has a significant effect on return on asset partially because the probability value is less than the significant level ( $0.01 < 0.05$ ). Therefore, **H2 is accepted** because debt to asset ratio has partial significant effect on return on asset of telecommunication companies listed in Indonesia stock exchange.
2. Debt to equity ratio has no significant effect on ROA partially because the probability value is .586 and more than the significant level which is 0.05. Therefore, **H3 is rejected** because debt to equity ratio has no significant partial effect on return on asset of telecommunication companies listed in Indonesia stock exchange.

**Discussions****Capital Structure Effect on Financial Performance**

Effect of capital structure on company's financial performance is discussed in pecking order theory and static trade-off theory. Pecking order theory by Myers and Majiluf (1984) implies a negative correlation. This theory suggests that the higher the proportion of debt in capital structure will result in lower profitability. A different view is expressed by Jensen & Meckling (1976) that support trade-off theory. Positive relationship can occur between capital structure and financial performance when the firm is able to balance the costs and benefits of debt to reach an optimal leverage level (Ronoh & Ntoiti, 2015).

**Capital Structure Effect on Return on Assets**

Based on the result presented above, debt to asset ratio performs a significant negative effect on return on asset of telecommunication companies listed in IDX. Similar to the previous research by Ibrahim Dahiru (2016), Tulung and Ramdani (2016), Muhammad Umar (2012) and Ebaid (2009), which also indicated significant and negative effects from debt ratio towards return on asset. It means, when the amount of debt to asset ratio goes up, then the amount of return on asset goes down. The regression result is in line with the pecking order theory that suggests financial managers choose internal funding as a top priority in financing business activities. Because based on the results of the analysis, to maintain the stability of return on asset value means to reduce the amount of debt. More specifically for PT. Smartfren Telecom, Tbk which has an average ROA value of -15% with the highest average of debt ratio value which reaches 77%. Meanwhile, PT. Telekomunikasi Indonesia, Tbk has also proven this theory by showing a stable performance with the average of return on asset at the 22% and having the least percentage of debt ratio. In contrary, Nirajini & Priya (2013), Tulung *et al* (2012) conducted the same research on trading companies in Sri Lanka and found out that debt ratio is positively associated with the return on asset of the trading companies in Sri Lanka. Likewise, Binangkit



(2014) also studied the same problem on manufacturing company in Indonesia and found out that debt ratio is positively correlated with return on asset.

Debt to equity ratio is predicted to have negative impact towards return on asset referring to the result obtained by Aluy *et al* (2017) Dahiru (2016) and Afrianty (2011). Besides that, having higher debt to equity ratio means having more debt than equity as capital to finance the business operations. According to Brigham (1983) in Afrianty (2011), if the cost of debt is greater than the cost of capital itself, then the average cost of capital will be greater so that the return on assets will be smaller, vice versa. The regression model of this research confirms that debt to equity ratio negatively associated with the return on asset. Still, the results of this study did not show a statistically significant effect. So, the negative influence of debt to equity ratio towards return on asset of the telecommunication companies listed in IDX is not significant.

### Dependencies on Debt Financing

The average result of each variable shows that the proportion of debt used as capital to finance the companies' activities is 65%, while the proportion of equity in the capital structure of telecommunication companies listed in IDX is 35%. Telecommunication companies in Indonesia, on average, use more debt as capital than equity. Nevertheless, from the results of research that has been done, stated that debt financing still negatively affects the financial performance of the companies. This implies that telecommunication companies in Indonesia were not able to use their debt effectively, because the advantage that could be obtained by using debt financing as proposed in supporting theory is not achieved. As a result, debt financing of telecommunication companies in Indonesia reduces the profitability of the company. Reviewing from each company, PT. Telekomunikasi Indonesia, Tbk has the highest and stable profitability level. When associated with the results of the analysis in this research, it is very reasonable because compared to other companies, only PT Telekomunikasi Indonesia, Tbk has a greater amount of equity than its debt. While the opposite, PT. Smartfren Telecom, Tbk, has the highest average of debt ratio which reach 77%, so it is not a surprise that the company is continuously generating low profitability and even lies below zero.

## CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

The conclusions from the results of this study are summarized in the following points:

1. Based on the hypothesis testing, the result shows that capital structure represents by debt to asset ratio and debt to equity ratio, have a significant influence simultaneously on return on assets. It becomes the base to accept the first hypothesis which stated that debt to asset ratio and debt to equity ratio have significant simultaneous effect towards return on asset
2. Debt to asset ratio has significant negative impact towards return on asset, proven by the statistical result and negative sign in the regression coefficient. The negative impact of Capital Structure towards companies' financial performance implies that every gain of debt is associated with loss in the financial performance.
3. Debt to equity ratio has negative but insignificant impact towards return on asset. Also proven by the statistical result and the negative sign in the regression coefficient.
4. According to data collected, telecommunication companies in Indonesia depend more on debt at 65% as their capital to finance business activities.

### Recommendations

Based on the results and discussion of research that have been put forward, here are some suggestions:

1. Financial managers should pay more attention to the proportion of debt usage as financing capital. Referring to the literature review, the company has an opportunity to improve its financial performance through the use of debt as a financing capital, since the use of the appropriate amount of debt as financing capital can provide benefits that will increase the profitability of the company. Therefore, financial managers should calculate the right amount of debt to be used as financing capital and allocate the use of debt effectively, so that the company's debt is not only a burden but a profit.
2. For researchers who wish to continue research on this topic, it is desirable to use data with longer period of time. Future research is advisable to expand the selection of variable of capital structure and add more ratios to measure financial performance. Future research can also choose other objects, can add

more telecommunications companies or choose other industries that exist in Indonesia. Comparative analysis can also be done to determine the difference of capital structure effect in one industry with other industry, and also future researcher can add new issues that are considered to affect the company's financial performance.

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