

# Key Indicators for Determining Capital Structure for Public Companies in Indonesia

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**Abstract.** This research has the purpose to explain the influence of assets consisting of asset structure (fixed assets ratio), liquidity (current ratio) and solvency (DAR) on capital structure (LTDER). This research has the population of tourism and hospitality companies that go public listed on the Indonesian Stock Exchange in the period 2018-2020, with total 35 companies, and using a sample technique, namely purposive sampling with a sampling technique with certain conditions, in order to obtain 22 companies that fulfill the criteria. This research uses data from secondary data collected by non-participant observation method. This research uses multiple linear regression analysis techniques. This paper produces research finding that the variable structure of the asset structure has no influence on the capital structure, the liquidity has an influence on the capital structure, and the solvency has an influence on the capital structure.

**Keywords:** capital structure, covid-19, tourist and hotel

## 1 Introduction

The definition capital structure is one of the indicators used in the company's operations. Company operation must be optimize its capital structure, so that its performance can be assessed both by creditors and investors. To optimize the capital structure, the combination of the amount of debt and equity in such a way as to minimize the company's cost [1].

The key indicators that can be considered in determining the capital structure are assets, liquidity and solvency [1]. Several previous studies that have examined the role of assets on capital structure state that the assets showed a positive but not significant impact on the capital structure [2], [3]. But there are also some who state that the assets showed a significant role on capital structure [4], [5].

In addition to asset structure, liquidity is also a key indicator in determining the capital structure of a company. Several previous studies have found that liquidity has a significant role in capital structure [6], [7]. Besides that, several studies have found that liquidity does not play a role in capital structure [8], [9]. Various findings from previous studies that are still inconsistent indicate that there is still a need for follow-up research on the topic of capital structure.

Solvency is also one of the key indicators for capital structure. Several previous studies have found that solvency has a significant role in capital structure [10]. On the other hand, several studies have found that solvency does not play a role in capital structure [11]. Research on the role of solvency on capital structure is still rarely done. Therefore, this topic still needs to be explored more intensively.

The existence of a virus called the Covid 19 virus has an impact on global health. In addition, it also has an impact on several other sectors such as the education, economic, social, tourism, hospitality, etc. This condition is due to the fear that the COVID-19 virus will spread through the air, shaking hands, and through people who have coughs and colds. In the end, everyone has a fear of interacting with other people. This fear ultimately makes a person more nervous, so that his mind will be disturbed, which causes more pain. Cases of death due to the covid virus and accompanying congenital diseases cause a fairly high mortality rate. In the end, many people choose to avoid interacting with others.

The sectors most affected by the diseases covid 19 are the tourism and hospitality sectors. The tourism sector in Indonesia is a rapidly growing sector. Many tourist attractions in Indonesia are frequented by many foreign tourists. The Covid-19 pandemic has caused the tourism industry in Indonesia to decline sharply. This is because many countries implement emergency conditions and restrictions related to human activities.

Based on so many differences in the results of previous studies and the phenomena that occurred during COVID-19, this study will further explore “**Key Indicators for Determining Capital Structure for Public Companies in Indonesia**”. The discussion will focus more on three main indicators, namely, asset structure, liquidity and solvency.

## 2 Literature Review

The emergence of the trade off theory is due to the merger of the Modigliani-Miller theory. Where in this theory there are agency costs and bankruptcy costs. This phenomenon proves that there is a trade off that comes from saving taxes from debt and bankruptcy costs [12]. This situation shows that if the proportion of debt is

large, the tax protection obtained will be even greater. And vice versa, if the proportion of debt is getting bigger, then the possibility of bankruptcy costs will be even greater. Therefore, the achievement of an optimal capital structure by the company can be done by balancing the benefits of tax protection with the burden of using a larger debt [13]. If trade-off theory is related to this research, it means that the composition of asset structure, liquidity and solvency have an effect on determining the optimal composition of capital structure. This optimal capital structure will provide information to creditors and investors as a basis for making business decisions.

The results of previous studies shows if the asset structure has an effect on the capital structure [4], [5]. It shows if the asset structure has a positive and significant influence on the capital structure. Based on the above, the research conducted is stating the hypothesis:

**H<sub>1</sub>:** Asset Structure has a positive and significant influence on Capital Structure

The results of previous studies also show the role if liquidity has to determine the optimization of the capital structure[6], [7]. This condition shows if liquidity has a negative and significant influence on the capital structure. Based on the above, this study states the hypothesis:

**H<sub>2</sub>:** Liquidity has a negative and significant effect on the Capital Structure

The role of solvency is also decisive in optimizing the capital structure [10]. The novelty and excellence of this research is due to the lack of research that highlights the role of solvency on capital structure. Based on this, this study states the hypothesis:

**H<sub>3</sub>:** Solvency has a significant effect on Capital Structure

### 3 Research Method

This research has a population of companies that manage tourism and hospitality that have gone public. This study uses samples and data obtained by using purposive sampling technique. The purpose of using purposive sampling as a sampling technique to obtain a representative sample. The sample selected must match the established criteria. The sample selection criteria are: [14]

1. Companies listed on the Indonesia Stock Exchange from 2018 to 2020 which are tourism and hospitality companies.
2. Companies that are always listed on the Indonesia Stock Exchange (never delisted).
3. Companies has complete data and financial reports that have been audited as of December 31 during the period 2018 to 2020.
4. Companies meets the research criteria.

By using the criteria of purposive sampling, so the number of samples used in this study is 27 companies. The following is a description of the research sampling process in table 1 below:

**Table 1. Research Sample**

<b>Number</b>	<b>Note</b>	<b>Company Listed</b>
1.	Companies listed on the Indonesia Stock Exchange from 2018 to 2020 which are tourism and hospitality companies.	<b>35</b>
2.	Companies that are always listed on the Indonesia Stock Exchange (never delisted).	<b>33</b>
3.	Companies has complete data and financial reports that have been audited as of December 31 during the period 2018 to 2020.	<b>28</b>
4.	Companies meets the research criteria.	<b>22</b>

**Source:** Processed Data

**Table 2. Sample List of Tourism and Hotels Companies**

Number	Code	Companies Listed
01	BAYUC	Bayu Buana Company Tbk
02	CLAYC	Citra Putra Realty Company Tbk
03	DFAMC	Dafam Property Indonesia Company Tbk
04	HOTLC	Saraswati Griya Lestari Company Tbk
05	ICONC	Island Concepts Indonesia CompanyTbk
06	INPPC	Indonesian Paradise Property Company Tbk
07	JGLEC	Graha Andrasenta Propertindo Company Tbk
08	JIHDC	Jakarta International Hotel Development Company Tbk
09	JSPTC	Jakarta Setiabudi International Company Tbk
10	KPIGC	MNC Land Company Tbk
11	MAPBC	MAP Boga Adiperkasa Company Tbk
12	MINAC	Sanurhasta Mitra Company Tbk
13	NASAC	Ayana Land International Company Tbk
14	NATOC	Nusantara Properti Internasional Company Tbk
15	PANRC	Panorama Sentrawisata Company Tbk
16	PJAAC	Pembangunan Jaya Ancol CompanyTbk
17	PNSEC	Pudjiadi and sons Company Tbk
18	PSKTC	Red Planet Indonesia Company Tbk,,
19	PTSPC	Pioneerindo Gourmet International Company Tbk,,
20	PZZAC	Sarimelati Kencana Company Tbk
21	SHIDC	Hotel Sahid Jaya International Company Tbk

Number	Code	Companies Listed
22	SOTSC	Satria Mega Kencana Company Tbk

**Source:** Indonesia Stock Exchange ( www.idx.co.id )

This research uses independent variables in the form of asset structure, liquidity and solvency. The dependent variable is the capital structure. Asset structure is proxied by [4]  $FAR = \frac{FixedAssets}{Total Assets}$ . Liquidity is

proxied by [6]  $Liquidity = \frac{CurrentAssets}{CurrentLiability}$ . Solvency is proxied by [10]  $Solvency = \frac{TotalLiability}{TotalAssets}$

This research uses data analysis techniques based on descriptive analysis, classical assumption test and multiple linear regression. This study uses the SPSS Ver 23 analysis tool. The multiple linear regression formula for this study is:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

Note :

- Y = Capital Structure
- $\alpha$  = Constanta
- e = error
- $\beta$  = Regression Coeficient
- $X_1$  = Assets Structure
- $X_2$  = Liquidity
- $X_3$  = Solvency

#### 4 Result and Discussion

The results of processing using analytical tools showed that the descriptive analysis for this study describe in the table 3 below.

**Table 3. Descriptive Statistics**

	Mean	Std. Deviation	N
Capital Structure	61,0503	95,77888	66
Assets Structure	46,6329	27,31349	66
Liquidity	428,9924	1672,96725	66
Solvency	39,2614	22,54761	66

**Source:** Secondary data processed in SPSS 23

In table 3 it can be obtained information that::

1. Based on the table, the following information is obtained, N or the number of valid data (legitimate to be processed), is 66 samples during the 2018-2020 period, while the missing is zero. Means all data about asset structure is processed and no data is lost. The mean is the total number of numbers in the data divided by the number of existing data for the asset structure variable of 46,6329. While the standard deviation or standard deviation shows a value of 27,31349.
2. Based on the table, the following information is obtained, N or the number of valid data (legitimate to be processed), is 66 samples during the 2018-2020 period while the missing is zero. This means that all data

about liquidity is processed and no data is lost. The mean is the total number of figures in the data divided by the number of available data for the liquidity variable of 428,9924. While the standard deviation or standard deviation shows a value of 1672,96725.

3. Based on the table, the following information is obtained, N or the number of valid data (legitimate to be processed) is 66 samples during the 2018-2020 period while the missing is zero. It means that all data about solvency is processed and no data is lost. The mean is the total number of numbers in the data divided by the number of available data for the solvency variable of 39,2614. While the standard deviation or standard deviation shows a value of 22,54761.
4. Based on the table, the following information is obtained, N or the number of valid data (legitimate to be processed), is 66 samples during the 2018-2020 period while the missing is zero. Means all data about modal structure is processed and no data is lost. The mean is the total number of numbers in the data divided by the number of available data for the capital structure variable of 61.0503. While the standard deviation or standard deviation shows a value of 95.77888.

For the classification assumption test, the normality test, multicollinearity test, heteroscedasticity test and autocorrelation test have met the rules that have been set. The following table will present the results of multiple linear regression analysis.

**Table 4. Partial Significance Test Results, (t Test)**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	7,827	17,894		0,437	0,664
Assets Structure	0,107	0,178	0,073	0,597	0,554
Liquidity	-0,376	0,097	-0,457	-3,894	0,000
Solvency	1,269	0,237	0,598	5,353	0,000

**Source:** Output SPSS, Processed Data 2021

From the results of the partial test in the table above shows that the following interpretation is :

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

$$Y = 7,827 + 0,107X_1 - 0,376X_2 + 1,269X_3 + 17,894$$

### 1. First Hypothesis Test Results

The results of the t-statistic test described earlier, stated that the Asset Structure coefficient was 0.107, with a significance of 0.554, which indicates greater than 0.05, ( $0.554 > 0.05$ ), so H1 is rejected. This is reinforced by the value of t count  $<$  t table ( $0.597 < 2.012$ ). Based on this, then it can be stated if the Asset Structure partially has no effect on the Capital Structure of the companies listed on the Indonesia Stock Exchange in the 2018 to 2020 period and is active in the tourism and hospitality sector. Whereas the asset structure coefficient value of 0.107 means that the asset structure has a positive effect on the capital structure. Based on this, it shows that for every 1% increase in the asset structure, the capital structure increases by 0.107. Conversely, if there is a decrease of 1%, so that there is decrease of the capital structure by 0.107. Based on the assumption other independent variables are considered constant.

Dividend and investment decisions that tend to be constant have an influence on the relationship between asset structure and capital structure. In addition, companies replaces some of its own capital with debt or otherwise, the stock price will change, if the company does not change other financial decisions. Besides that the change in asset structure does not change the capital structure, thats mean there is no best asset structure. Otherwise all asset structure is good. However for changing the asset structure it turns out

that the value of the company changes, then the best asset structure will be obtained. These results are in line with research conducted by [2] and [3] that the greater the asset structure of a company, the greater the company's debt. This is because companies that have a large composition of fixed assets have easy access to loans and their fixed assets can be used as collateral for their debts.

## 2. Second Hypothesis Test Result

The results of the t-statistical test show that the liquidity coefficient is -0.376 with a significance of 0.000 so that which is smaller than 0.05 ( $0.000 < 0.05$ ) then H<sub>2</sub> is accepted. Based on this, the value of t count > t table ( $-3.894 > 2.012$ ). Therefore, it is concluded that liquidity partially affects the companies listed on the Indonesia Stock Exchange in the 2018 to 2020 period and is active in the tourism and hospitality sector. The value of the liquidity coefficient of -0.376 can be interpreted that liquidity has a negative effect on capital structure. This shows that for every 1% increase in liquidity, the capital structure will decrease by 0.376. On the other hand, if there is a decrease of 1%, the capital structure will increase by 0.376. Assuming other independent variables are considered constant.

Dividend and investment decisions that tend to be constant have an influence on the relationship between liquidity and capital structure. Besides that for the company has current assets with current liabilities or vice versa, the stock price will change, if the company does not change other financial decisions. In other words, if changes in liquidity do not change the capital structure [15], means that there is no best liquidity. All liquidity is good. But if by changing the liquidity it turns out that the value of the company changes, then the best liquidity will be obtained.

These results are in line with research conducted by [6] and [7] states that the larger the size of the company, the greater the liquidity, so that it will affect the company's capital structure. Large companies have the ease of obtaining debt so that it will have an impact on the company's capital structure.

## 3. Third Hypothesis Test Result

The test results of the t-statistical test above, the solvency coefficient is 1,269 with a significance of 0,000 which is smaller than 0,05 ( $0,000 < 0,05$ ), then H<sub>3</sub> is accepted. This is reinforced by the value of t arithmetic > t table ( $5,353 > 2,012$ ). So it can be concluded that partially Solvency has an effect on the companies listed on the Indonesia Stock Exchange in the 2018 to 2020 period and is active in the tourism and hospitality sector. The solvency coefficient value of 1.269 can be interpreted that solvency has a positive influence on the capital structure. This shows that for every 1% increase in solvency, the solvency will increase by 1,269. And conversely, if there is a decrease of 1%, then the capital structure will decrease by 1,269. Assuming other independent variables are considered constant.

Dividend and investment decisions that tend to be constant have an influence on the relationship between solvency and capital structure. Besides that for the company has current assets with current liabilities or vice versa, will the stock price change, if the company does not change other financial decisions. Besides that for the change in solvency does not change the capital structure, means that there is no best solvency. Otherwise all liquidity is good. But if by changing the solvency it turns out that the value of the company changes, then the best solvency will be obtained..

These results support research from [10], which indicates that long-term debt will be directly proportional to profits. This can be seen from the number of companies that use the company's external funds compared to internal funds. In addition to the large amount of funds obtained, the payback period is also long. With long-term liabilities or solvency, the company can expand or develop its company so that the profitability obtained by the company will certainly increase.

The coefficient of determination in this study aims to determine how much influence the independent variables Asset Structure, Liquidity and Solvency have on Capital Structure. The following are the results of the coefficient of determination in this study:

**Table 5. Coefficient of Determination Test Result (R<sup>2</sup>)**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,699 <sup>a</sup>	,489	,455	26,69811

a. Predictors: (Constant), Solvency, Liquidity, Structure, Asset

b. Dependent Variable: Modal Structure

Based on the table above, the Adjusted R Square obtained is 0.455 or 45.5%. This shows that the independent variables consisting of Asset Structure, Liquidity and Solvency together affect the dependent variable, namely the Capital Structure of 45.5%. And the remaining 54.5% cannot be explained in this study.

## 5 Conclusion and Recommendation

Based on the analysis and discussion that has been described previously, the conclusion from the results of the analysis is that the asset structure has no effect on the capital structure of tourism and hospitality companies listed on the Indonesia Stock Exchange in 2018-2020. From the whole test, only the asset structure has no effect on the capital structure. From this research, it can be seen that only a few companies that are the sample of this research have the smallest asset structure. This implies that the asset structure of Rp. 1 total assets will be measured by Rp. 2.49 of the assets owned by the company. Liquidity affects the capital structure of tourism and hospitality companies listed on the Indonesia Stock Exchange in 2018-2020. From the results of testing liquidity has an effect on the capital structure. So it can be concluded from several companies that are sampled in this study, it shows that Rp. 1 of total assets will be measured by Rp. 0.80 of liquidity that is owned by the company. Solvency affects the capital structure of tourism and hospitality companies listed on the Indonesia Stock Exchange in 2018-2020. From the overall solvency test has an influence on the capital structure. This can be seen from the extent to which the company is able to pay off its debts if the company is liquidated.

Based on experience during the research and in accordance with the conclusions, the research provides suggestions and inputs that are useful for the company. It is hoped that the company can reconsider the amount of debt used in the company, because the debt in the company is greater than its capital. So that it can be categorized as a company that has a lot of debt and can cause the company's shares to be fundamentally less than ideal and can affect the company's net profit. For investors, it is expected to conduct an analysis of the financial statements based on financial ratios that are relevant to the value of the company. Because it can be useful for considering future investments. For further researchers who wish to conduct similar research, it is hoped that they can consider the sample used with a wider scope, such as manufacturing companies, the service sector or others, in order to produce different studies. It is hoped that further researchers can add or use other variables other than variables, from this research, such as return on assets, company size and institutional ownership. Also, it is hoped that it will add years to the research period, so that it can produce different and more varied results.

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