# The Effect of Liquidity Ratio and Solvency Ratio on the Profitability of Plantation Subsector Companies Listed on the Indonesian Stock Exchange

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## ABSTRACT

This study was conducted to determine the effect of liquidity and solvency on profitability in plantation sub-sector companies listed on the Indonesia Stock Exchange for the period 2017 to 2020 because it often happens that companies are unable to balance their liquidity and solvency positions because the target company is pursuing profits without compensating management in terms of the ability to pay the debt.This study uses multiple regression analysis with a significance of 0.05. Liquidity variable is measured using current ratio, solvency is measured by debt ratio, while profitability is measured by return on assets. The sampling method used is purposive sampling method. The results partially show that liquidity has a significant effect on profitability, while solvency also has a significant effect on profitability and has a significant effect on profitability. Simultaneously liquidity and solvency have a significant effect on profitability.

**Keywords**: Liquidity, Ratio, Solvency, Profitability, BEI,

## INTRODUCTION

The plantation industry plays an important role in economic development in Indonesia. The plantation sector provided more than 19.4 million jobs for the Indonesian population in 2014 and contributed 3.46% to gross domestic product in 2016. History records Indonesia has been number one for rubber, coffee, tea, sugar and some commodities. other plantations in 2014. Europeans sought and colonized Indonesia because of its high economic value of produce and spices(Iskamto et al. 2021). Based on data from the Central Statistics Agency (BPS) shows that from this sub-sector of plantations in the period 2014-2018 produced GDP of 1,801.4 trillion, while the export value reached Rp. 1,874.5 trillion, and the accumulation of additional export value of Rp. 333.1 trillion, in addition to contributing to the national economy, the plantation sub -sector also contributed in creating jobs, a total of 23.9 million people got jobs from this plantation sub -sector. Based on sectoral data, the plantation sub -sector accounts for 90% of Indonesia's agricultural exports, meaning that this sub -sector is the mainstay in building the country's economy (Republika, 2019).

Recorded the average financial performance of plantation sector issuers during semester I-2017 experienced a decline compared to semester I-2016, SMAR declined the sharpest by 77.91%, followed by BWPT by 39.71%, MAGP by 38.78%, JAVA by 23 , 89%, and GZCO by 20.10%. This decrease is due to the decline in the price of Crude Palm Oil (CPO) and also consumer purchasing power (Okezone, 2018). In general, a company is established with the intention that the company can grow and be able to maintain and maintain the continuity of business in the future. Corporate survival is a measure of a company's performance as opposed to bankruptcy. However, with economic conditions that are constantly changing, then this situation can affect the company's performance(Iskamto 2015). The essence of financial statements is very important given that various crucial decisions related to the survival of the business entity are taken, one of which is based on financial statements. The main purpose of financial statements is to be an important source of information for users of information. The value stated in the financial statements is always changing from each period. Changes in the value of the

financial statements will certainly have an effect on decision making. Therefore, financial statements are very meaningful for interested parties(Iskamto 2020).

Every company in essence is to get maximum profit. Profitability is a measure of a company in generating profit. Profitability is very important for all users, especially equity investors and creditor investors(Setiawati 2021). .The profitability of a company will affect the policy of investors on investments made. The company's ability to generate profit can attract investors to invest their funds to attract expanding the business, otherwise a low level of profitability will cause investors to withdraw their funds. Meanwhile, for companies, profitability is a ratio used to measure the evaluation of the effectiveness of the management of the business entity.(Syahsudarmi 2021).

A solvable company means that the company has assets or wealth that can be used to pay all its debts, but not by itself that the company is liquid. Similarly, conversely, an insolvent company is not automatically liquid. For companies that are insovable and liquid, both will face financial difficulties, which are conditions under which the company must meet its obligations. A company that is insovable but liquid is not immediately in a state of financial difficulty, but a company that is liquid will soon be in trouble because it immediately meets its short -term obligations. Companies that are insovable but liquid are still working well, and still have the opportunity to improve their solvency. But if the effort is not successful,(Alhempi, Sudirman, and Supeno 2021; Iskamto, Ghazali, and Aftanorhan 2020).

It often happens that the company is not able to balance it where a position of liquidity and solvency is insufficient due to the company always pursues profit without balancing the management aspects of its ability to pay its obligations or because the company pays too much attention to liquidity and solvency to neglect aspects of profitability. Good ability to pay will then minimize or reduce the negative impact that arises in the company. Financial management needs to pay attention to the factors that have an effect on profitability in order to maximize the company's profits. A company that does not have enough funds to pay its obligations can almost be sure that the company is no longer able to pay.
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## LITERATURE REVIEW
A. Profitability

Profitability is the ability of a company to earn a profit in relation to sales, total assets and own capital. Profitability is a ratio that measures a firm's ability to make a profit at the level of sales, aset and certain share capital, (Hanafi and Halim, 2014),

Profitability is the ability of a company to profit from its business. The profitability ratio measures the ability of a firm to generate profit by using the resources owned by the firm, such as assets, capital and sales of the firm, (Sudana 2015).

Profitability ratio is a major part of financial statement analysis. The most important thing in financial statements is the balance sheet and profit and loss. Where the balance sheet is a financial statement issued every working day by an accountant, which describes the assets, debt and capital, and shows the financial position of a bank at a particular time. and non -operational as well as net profit for a particular period, (Riva'i, 2013).

The profitability ratio is to show the company's success in making a profit. Potential investors will carefully analyze the smooth running of the company and its ability to make a profit (profitability), because they expect dividends and market prices from its shares. This ratio is intended to measure the efficiency of the use of company assets. Efficiency here can also be associated with sales that are successfully created. In addition, the profitability ratio can also be expressed as a ratio used to measure the effectiveness of management seen from the profits used on sales and investments.

Profitability ratio is the ratio intended to produce the company's ability to generate profits for a certain period and also provide an overview of the effectiveness of management (profit) in carrying out its operations.

This ratio is divided into gross profit margin, net profit margin, return on assets, return on equity, and basic earningspower.

## B. Liquidity Ratio

A company that does not have enough funds to pay its obligations can almost be sure that the company is no longer able to pay. The ability to pay only exists in a company if its ability to pay is so large that it can meet all its financial obligations that must be met immediately, thus the ability to pay can be known after comparing its ability to pay on the one hand with its financial obligations that must be met on the other.

The liquidity ratio indicates the company's ability to cover its short -term obligations when they mature, this ratio can warn the company about upcoming cash flow problems. Companies with liquidity that will not only be able to pay bills on time, but also have enough cash to take advantage of emerging business opportunities, (Zimmerer and Scarborough 2011: 125)

Liquidity ratio is a ratio that describes a company's ability to meet short -term obligations. Liquidity issues are related to the problem of a company's ability to meet its financial obligations that must be met immediately. A company that has the power to pay may not be able to meet all its financial obligations that must be met immediately (Kasmir 2012). Liquidity ratio consists of Current ratio, Quick ratio, Cash ratio.

Companies with high levels of liquidity avoid the risk of failing to pay their short -term liabilities. Companies that have high liquidity will affect the profits earned. Companies with a high level of liquidity will increase the possibility of dividend distribution in cash, thus attracting investors to invest their capital.

## C. Solvency

When the liquidity ratio uses its short term to predict cash flows more accurately. While in the long run it is not used because it is less reliable, and therefore the solvency ratio uses a measure of long -term analysis. A company is said to be insolvent, if the company has a total debt greater than its total assets. Solvency analysis involves several key elements. Capital structure analysis is one of them. The capital structure of a company refers to funding. Another key element of solvency is profit (earnings) or earnings power (earnings power) which indicates the ability to generate cash from operations. A stable income stream is an important measure of a company's ability to borrow in times of cash shortage.

This ratio is also called the leverage ratio, which describes the company's ability to pay its long-term obligations or obligations if the company is liquidated, (Harahap 2011). A solvency or leverage ratio is the use of assets or funds for which the use must cover or pay a fixed expense. The solvency indicates the proportion of the use of debt to finance its investment.

The solvency ratio or leverage ratio is a ratio used to determine how much a company's assets are financed by debt. This means how much debt burden borne by the company compared to its activities. Solvency ratio that will be used in this study is Debt to Asset Ratio. "Debt to Asset Ratio is a debt ratio used to measure the ratio between total debt and total assets. In other words, how much a company's assets are financed by debt or how much a company's debt affects asset management, (Kasmir 2012).

The types of ratios that exist in the solvency ratio are profit before interest, Debt to asset ratio, Debt to equity ratio.

## METHOD

The research used is causal associative, measuring the relationships between research variables or useful for analyzing how one variable affects another variable, or looking for causal relationships, that is, independent variables to dependent variables. The population in this study is plantation companies registered from 2017 to 2020. The population used is all plantation companies registered from 2017 to 2020. While the determination of the sample based on purposive sampling method is the selection of samples in the population that has been determined before publishing and publish a complete annual financial report for 2017-2020 with positive corporate earnings. The data used in this study are secondary data, namely data sourced from the annual financial statements of plantation sector companies listed on the Indonesian Stock Exchange, previous research and other related sources. Collection of data obtained from the Indonesian Stock Exchange, namely

throughwww.idx.co.id. Data collection was done by searching annual reports and ongoing reports or social information related to the sample company.

## RESULTS AND DISCUSSION
### Classical Assumption Test
a.      Normality

The normality test aims to test whether the dependent variables and independent variables contained in the regression model have a normal distribution or not. Good data is normally distributed data. If the resulting data is not normally distributed, then the statistical test performed is invalid.

Based on the results of normality test using Kolmogorov Smirnov test in the table below can be seen that the significance value is 0.960. This indicates that the data is normally distributed. Because in the test using Kolmogorov Smirnov test it is said that the data is normally distributed if the significance value> 0.05.

**Table 1. Test of Normality**
**One-Sample Kolmogorov-Smirnov Test**

|  |  | Unstandardized Residual |
|---|---|---|
| N |  | 28 |
| Normal Parameters | Mean | .0000000 |
|  | Std. Deviation | .02377263 |
| Most Extreme Differences | Absolute | .096 |
|  | Positive | .096 |
|  | Negative | -.083 |
| Kolmogorov-Smirnov Z |  | .506 |
| Asymp. Sig. (2-tailed) |  | .960 |
| a. Test distribution is Normal. |  |  |
|  |  |  |

b. Multicolonerity Test

The multicolonerity test aims to test whether the regression model found a correlation between independent variables. The multicolonerity test can be seen from the tolerance value and the Variance Inflation Factor.

**Table 2. Multicollinearity Test**

| Model | Collinearity Statistics | |
|---|---|---|
|  | Tolerance | VIF |
| 1 LIQUIDITY | .709 | 1,411 |
| SOLVABILITY | .709 | 1,411 |

From the table test results, it can be seen that the liquidity variable tolerance number is 0.709, the liquidity ratio tolerance number is 0.709. The VIF value of the liquidity variable is 1,411, the VIF value of the solvency variable is 1,411. Based on the tolerance value for all variables greater than 0.10 (tolerance> 0.10) and the

VIF value less than 10 (VIF <10), it can be concluded that between liquidity, solvency does not occur multicolonerity.

c. Heteroskedasticity test

The heteroskedasticity test aims to test whether in the regression model there is an inequality of variance from the residual of one observation to another (Ghozali 2011). Testing is done with Glacier test that is by regressing independent variables to absolute residual.

This test aims to test whether in the regression model there is an inequality of variance from the residual of one observation to another. If the residual variance of one observation to another remains constant, it is called homokedasticity, and if it differs it is called heteroskedasticity. A good regression model is the absence of heteroskedastists.

### Table 3. Test of Heteroskedastistas

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .009 | .009 | | .958 | .347 |
| | LIQUIDITY | .004 | .002 | .411 | 1,878 | .072 |
| | SOLVABILITY | .001 | .004 | .047 | .217 | .830 |

From the above test, it is known that the significance of liquidity ratio and solvency ratio is greater than 0.05. Thus it is interpreted that there is no heterokedasticity.

d. Autocorrelation Test

The Autocorrelation Test aims to test whether in a multiple linear regression model there is a correlation between the residuals of period t and the residuals of period t-1 (previous). This test was performed using the Durbin-Watson test (DW-test). The results of the autocorrelation test using the Durbin Watson test can be seen in the following table:

### Table 4. Autocorrelation Test
#### Model Summaryb

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | .846a | .716 | .649 | 2.0247052 | 2,154 |

The test value is between du <d <4-du. Based on the autocorrelation test results obtained. The value of du is obtained from the durbin watson table 1,560. The 4-du value obtained is 2,440. So the value of durbin watson is located between the value of idu and the value of 4-du which is 1,560 <2,154 <2,440. so it can be concluded that there is no autocorrelation in this study.

## Multiple Linear Regression Test

Multiple regression analysis is an analysis of the relationship between a dependent variable with two or more variables

### Table 5 Multiple Regression Analysis Tests

#### Coefficientsa

| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 4,251 | 2,317 | | 2,955 | .007 |
| | LIQUIDITY | .223 | .074 | .229 | 4,124 | .035 |
| | SOLVABILITY | .318 | .027 | .184 | 2,786 | .024 |

Based on the table above, the results of the multiple regression test above can be obtained as the following regression equations:

$Y = 4.251 + 0.223X1 + 0.318 X2$

**Test the hypothesis**

    a.    Partial test (t test)

Partial test is performed to determine the level of significance of the research variable that wants to test its effect on the variable Y separately or individually by looking at the sig value (p-value) or compare t-count with t-table.

**Table 6. Results of t Test (Partial Test)**

| Model | | Unstandardized Coefficients | | t | Sig. |
|---|---|---|---|---|---|
| | | B | Std. Error | | |
| 1 | (Constant) | 4,251 | 2,317 | 2,955 | .007 |
| | LIQUIDITY | .223 | .074 | 4,124 | .035 |
| | SOLVABILITY | .318 | .027 | 2,786 | .024 |

a. Dependent Variable: PROFITABILITY

From the two -part partial test can be explained as follows:

1. From the result of the regression coefficient, it is obtained that liquidity has a t value of 4,124 with a significance of 0.035 <standard value of 0.05. This means that liquidity has a significant effect on profitability so that Hypothesis H1 is accepted.
2. From the results of the regression coefficient, it is obtained that the solvency has a t value of 2,786 with a significance of 0.024 <the standard value of 0.05. This means that the solvency has a significant effect on profitability so that Hypothesis H2 is accepted.

    b.    F-statistic test

The F statistical test basically shows whether all the independent variables included in the model have a collective effect on the dependent variables. The results of the calculation of Test F can be seen in the following table:

**Table 7. Test F**
**ANOVAb**

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|

| 1 | Regression | 2452.222 | 2 | .726 | 12,373 | .032a |
|---|---|---|---|---|---|---|
| | Residual | 1467,459 | 25 | .375 | | |
| | Total | 3919.681 | 27 | | | |

a. Predictors: (Constant), SOLVABILITY, LIQUIDITY
b. Dependent Variable: PROFITABILITY

In the table above it can be seen that obtained the value of F is 12,373 and the significant value is 0.032. Because the significance value is high, that is, less than 0.05 (α = 0.05), the hypothesis is accepted. This indicates that the independent variables of liquidity and solvency together have a significant effect on profitability.

**Coefficient of Determination Test**
The determinant coefficient indicates how much relationship occurs between the independent variables (X1, X2) simultaneously to the dependent variable (Y). The value of R ranges from 0 to 1. If the value is closer to 1, it means that the relationship is stronger. On the other hand, the closer the value is to 0, the weaker the relationship. The following are the test results of the determinant coefficients in this study.

**Table 8.Cefficient of Determination Test**

**Model Summaryb**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | .846a | .716 | .649 | 2.0247052 | 2,154 |

Based on the SPSS output, it appears that from the calculation results, the Adjusted R Square value of 0.649 is obtained. In other words, this shows that the large percentage of profitability that can be explained by the variation of the two independent variables, namely liquidity and solubility, is only 64.9%, while the remaining 35.1% is explained by other reasons outside the model.

**Discussion**
Based on the results of t-statistic test in the table, it is known that the liquidity variable shows a calculated value of 4.124 with a significance level of 0.036 where the significance level is smaller than the significance level α = 0.05. This indicates that there is a significant influence between liquidity and profitability in plantation sector companies listed on the Indonesian Stock Exchange in 2017-2020. This means that the larger the value of the current ratio, it is indicated that the profitability will increase. Large profitability indicates the greater the company's ability to meet its short -term obligations or the better its liquidity.
Based on the results of t-statistic test in the table, it is known that the solvency variable shows a calculated value of 2.786 with a significance level of 0.024 where the significance level is smaller than the significance level α = 0.05. This indicates that there is a significant effect between solvency (debt ratio) to profitability in plantation sector companies listed on the Indonesian Stock Exchange in 2017-2020. The results of this study are in line with that conducted by Asniwati (2020), with the result that the Debt Ratio partially has a significant effect on financial performance (Return On Asset). This indicates that increasing the Debt Ratio, then followed by an increase in financial performance (Return On Asset). Companies that have high solvency, it will have a large risk of loss,
The results of data analysis show that the liquidity ratio and solvency have an effect on the profitability ratio. This is because the relationship between the two variables with a Fhitung value of 12,373 with a significance

value of 0.032 is smaller than 0.050. This means that the variables Liquidity and Solvency have a significant effect on Profitability. This study shows that the company's ability to pay long -term and short -term debt is followed by an increase in profitability. In this study shows that the company's ability to guarantee long debt and short debt is good and should be followed by maximum profit. This result is in accordance with the research of Anis Fadhillah (2017) with the result that Debt Ratio simultaneously has a significant effect on profitability.

## CONCLUSION

Based on the results of research and discussion, it can be concluded that the liquidity ratio has a significant effect on the profitability of plantation sector companies in the Indonesian stock exchange. It is seen that the small size of profitability is affected by liquidity, which means that when the company's ability to earn profits increases, then the company's ability to pay its short -term obligations also increases. The solvency ratio has a significant effect on the profitability of plantation sector companies in the Indonesian stock exchange which means that if the company's ability to earn profits increases then its ability to pay long -term debt will also increase. Liquidity ratio and solvency ratio have a significant effect on profitability,

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