

THE IMPACT OF LIQUIDITY AND SOLVABILITY TOWARD PROFITABILITY ON FOOD AND BEVERAGE PRODUCT SUBSECTORS COMPANIES THAT LISTED IN INDONESIA STOCK EXCHANGE

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***Abstract.** This aim of this research was to know whether the liquidity and solvency variables have impact on probability in the food and beverages product subsector. The data source of this research was secondary data obtained from financial reports and annual reports of companies listed on the Indonesia Stock Exchange in 2016-2018. Then this study used purposive sampling to determine the sample that in research. And several methods of data analysis that to be processed, with test classic assumptions, test hypotheses and regression analysis in providing conclusions of this study.*

It was found that the average liquidity variable in the company was in good condition, solvency in the related company was not good and the same as liquidity, profitability in the average company was in good condition. Meanwhile based on the hypothesis test it was concluded that liquidity has a significant effect on profitability but solvency did not influence profitability. Liquidity and solvency had a significant impact on profitability simultaneously

***Keyword:** Liquidity, solvency, profitability*

I. INTRODUCTION

Profitability is a very important aspect for the company owner or any party who has an involvement in the business activities carried out by the company. Profitability is also considered as a result obtained by the efforts of the management.

According to (Horne and Wachowicz, 2009) profitability is a ratio that is used as a reference for management in assessing the ability of the company it runs to gain profits in a certain period both in product sales and as a service provider, which of course by using the resources owned by the company both in the form of assets and capital or employees who work for businesses that are run. According to Sutrisno (2003) profitability is also usually used by company leaders or company owners in measuring the ability of their management to meet targets and complete their tasks and responsibilities.

Profitability is very helpful for investors in determining their decision when they want to invest with a profitability ratio so that investors can assess the company's ability to grow profit annually. Profitability is also very useful for shareholders, especially those who invest long-term and expect profits in the form of dividends. Profitability can also help investors to assess whether the related company can maximize all given capital into profits or not.

Liquidity is the result of an assessment of the company's condition through a number of current assets that are used to support the condition of the company, a company can be declared to have a good level of liquidity if the company can utilize its current assets in operational activities, especially in short periods of time

In improving good performance in this company, the management must also think about the liquidity of the company where liquidity is a picture of the work of the management in managing assets, especially current assets so that the company can facilitate its operations or pay off all obligations with the assets they have.

Another important aspect that is considered by the parties who directly or indirectly provide support in the form of funds or energy is solvency, where solvency is the basis for investors and creditors in assessing the company's ability to pay off its debt in the long term or not.

To carry out operational activities, the company requires financial assistance from outside the company by way of debt or borrowed funds. However, the use of funds that are too large will have a negative impact on the company, so instead the solvency ratio will be used to measure the feasibility of the company in terms of managing its debt.

Wareza (2019) Launching a case faced by PT Unilever Indonesia in the first quarter of 2019 that the company's financial performance decreased profit by 4.36% from the previous period. Based on internal audited financial statements that were not audited but published by the IDX it was found that the company experienced a decline in revenue. Departing from the case of companies that experienced a decline in profit, the researchers were interested in learning how liquidity, solvency, and profitability in the subsector of food and beverage products. 2016-2018. Furthermore, this study also looks at the effect of liquidity and solvency on profitability partially and simultaneously

II. LITERATURE REVIEW

Financial Statement Analysis is an analysis technique in the field of financial management that is used as a measurement of a company's financial condition for a

certain period. This analysis is usually used to assess the financial capability of a company either by the management of the company itself or by investors who want to invest in the company (Murhadi, 2013).

Liquidity. Liquidity is a ratio used to measure a company's short-term capability if a company needs cash in a short time (Weygandt et al 2012). Brealey, et al (2001) state that a company is good in financial terms if it is able to pay its obligations in cash.

There are several cases which show that the company is unable to pay off or settle all its obligations on time, and many companies are able to settle all their demands well. The ability of this company is an assessment based on the disbursement of assets owned by the company. Riyanto (2012) states that the company's ability to pay off all obligations with current assets is called liquidity.

It can be concluded that Liquidity is a measurement system used to measure or assess the ability to pay with cash than a company when the cash is needed in a short period of time in its operational activities. Brealey, et al (2001) state that there are several types of liquidity ratios as follows:

Current ratio. This ratio is calculated by dividing current assets by current liabilities (Current ratio = Current assets / Current liabilities). This ratio shows the extent to which current liabilities are covered by assets that are expected to be converted into cash in the near future.

Cash ratio is a measurement used to measure the company's ability to pay off all its responsibilities in accordance with market prices with cash owned by the company (Bodie et al, 2010). Can be formulated Cash ratio = (Cash + Securities) / Obligations smoothly

Quick ratio (Acid-Test Ratio). This ratio is calculated by reducing inventory by current assets then dividing the remainder by current liabilities (Quick ratio = Current assets - Current inventories / liabilities). Inventory is the most illiquid current asset, so inventory is likely to incur losses in the event of liquidation. Therefore, this ratio measures the ability of a company to pay short-term obligations without having to rely on sales on inventory.

Solvency. Solvency is a debt ratio that illustrates a company's ability to overcome the proportion of debt by managing assets or equity owned by the company (Hanafi and Halim, 2009). Solvency Ratio is the use of assets and sources of funds by companies where in the use of assets or sources of funds the company must incur fixed costs or expenses. The use of these assets is ultimately intended to increase potential returns for shareholders (Martono and Harjito, 2007)

Based on the statements above, it can be concluded that the Solvency Ratio is used to measure the company's ability to meet or pay off all matters relating to financial obligations that are long-term and short-term in the event of liquidation in the company.

Solvability forming variables.

Debt is all the company's financial obligations to other parties that have not been fulfilled, where this debt is a source of funds or company capital that comes from creditors. Debts can be divided into two (Munawir, 2010), namely:

a. Current liabilities

Kasmir (2007) Stating that current debt is a company's obligation to be paid, the period of current debt is one year therefore current debt is also called short-term debt

b. Long-term debt

Kieso (2002) explains that long-term debt consists of sacrificing economic benefits that are very possible in the future due to current obligations that are not paid in one year or the company's operating cycle, whichever is longer

Capital is the company's wealth that comes from internal and external including the wealth generated by the production process of a company. Capital is a concrete item that still exists in a corporate household that is in the debit balance sheet, as well as in the form of purchasing power or the exchange rate of goods recorded in the credit balance sheet (Munawir, 2010)

Asset is the main resource controlled by the company to be processed so that it can generate profits in the company and its fair value can be objectively valued (Munawir, 2010). Siregar (2004) states that assets in general are goods that have economic value and usefulness obtained through economic transactions. assets are resources owned by companies that have economic value and benefits that are the result of economic activities or transactions

From some of the above understanding it can be concluded that capital is a source of corporate wealth obtained from investors or the activities of the company itself to assist the company in carrying out its operational activities and obtain profits from the activities that have been carried out.

Profitability. In investing, investors always expect profits from invested companies usually in the form of dividends which are the result of profit sharing from the

company's operational activities in a certain period, but to predict and also measure how the company's ability to utilize all of its resources to generate profits (Syamsuddin, 2001). So rather than that investors must be able to analyze the ability of the market one of them by using profitability ratios

Profitability ratios also not only measure the company in generating profits, but also can assess the performance of the company in carrying out its company activities in a certain period. Brigham & Houston (2013) states that profitability is a ratio that reflects the final results of all financial policies and operational decisions, which is also a group of ratios that show a combination of the effect of liquidity of asset management, and debt on operating results

Profitability is a ratio used to measure a company's ability to generate profits from its normal activities. The following are some of the objectives of profitability ratios (Herry, 2015), including 1) measuring the company's ability to generate profits for a certain period; 2) assess the profit position of the previous year and current year; 3) assess the development of profits from time to time; 3) measure how much reasonable net income is generated from each amount of funds embedded in total assets; 4) measure how much reasonable net income is generated from each amount of funds embedded in total equity; 5) measure gross profit margin on net sales; 6) measuring operating profit margins; net sales; 7) measure the net profit margin on net sales

From the opinions of the experts above, it can be concluded that profitability is a tool that can be used to measure the company's ability to benefit from operational activities within the company to help investors and management to determine decisions that help the company to develop even better.

Here are some types of profitability:

Return on assets. Fahmi (2016) Concludes that this ratio can also be a reference for investors or management in analyzing the ability or effectiveness of the company in generating overall profits through the management of assets owned by the company. Can be formulated $\text{Return on assets} = \text{Net income} / \text{Total Assets}$

Return on Equity. The ratio used to measure the level of corporate income in the form of net profit through managing the company's equity ($\text{Return on equity} = \text{Net income} / \text{Total equity}$).

Gross Profit Margin. It is a ratio used to measure a company's ability to generate profits with all assets owned by the company. Can be formulated $\text{Gross profit margin} = \text{Gross profit} / \text{Sales}$

Operating Profit Margin. It is a ratio that evaluates a company's ability to generate a return on sales made during operational activities. Formulated with $\text{Operating profit margin} = \text{Operating profit} / \text{Sales}$

Net profit margin. Is a ratio that is an assessment of the net profit results from sales made by the company in a certain period. Net profit margin = net profit / sales

III. RESEARCH METHODOLOGY

Research design

Research is an activity with the aim of developing science. Research objectives include problem discovery and problem solving. In this study, the study will use descriptive methods. Data sources from research are secondary data obtained from the company's financial statements and annual reports.

Secondary data is data obtained from other parties in the form of financial statements from companies, not collected directly by researchers. Then this study also uses purposive sampling to determine the sample that will be used in research. And will be accompanied by several hypothesis tests and data that will be processed to provide conclusions from the research that researchers do.

In this study, the population in this study will use the financial statements of the food and beverage sub-sector consumer goods subsector companies listed on the Indonesia Stock Exchange including Ultrajaya Milk Industry Tbk, Tribayan Tirta Tbk, Wilmar Cahaya Indonesia Tbk, Delta Jakarta Tbk, Indofood CBP Sukses Makmur Tbk. Muli Bintang Indonesia Tbk, Indofood Sukses Makmur Tbk, Mayora Indah Tbk, Prashida Anak Niaga Tbk, Nipon Indosari Corporindo Tbk. Researchers choose the Consumption subsector because the company's operational activities tend to have a relationship or impact with the surrounding environment of the company.

Variable Operations

This variable is an independent variable, or often called an independent variable. In this study the authors use two independent variables, namely liquidity and solvency Wild (2005) states that Liquidity is a ratio used by companies to measure the company's ability to use cash or other current assets in this study the ratio to be used is the Current Ratio which is the ratio used to measure the company's ability to pay its current liabilities with all current assets owned by the company in the short term:

$$\text{Current Ratio} = \frac{\text{Current Asset}}{\text{Current Liabilities}}$$

Current Ratio : Current ratio of the company

Current Asset : Total current assets owned by the company

Current Liabilities : Total current liabilities that the company has

The next independent variable (X2) is Solvency. Solvency is a ratio used to assess a company's ability in whether the company is able to pay its obligations through all assets or equity owned by the company (Harahap, 2011). In this study, the ratio that will be used to measure solvency is Debt to Asset, which is a measurement ratio of a company's ability to assess the ownership of its assets financed by the debt owned by the company

$$Debt\ to\ Asset = \frac{Total\ Debt}{Total\ Asset}$$

Debt to Asset : An assessment of asset ownership through debt held.

Total Debt : Total Debt held by the company

Total Assets : Total Assets Owned by the company.

This variable is a variable that is influenced by independent variables, and is bound. In this research, the dependent variable is profitability, where this measurement is carried out to see how companies can generate profits within a certain period by utilizing all supporting aspects that they have such as assets, equity, and also the sales they make in this research. Return on Assets is made indicator. According to Salim (2010) The higher the value of ROA, the more effective the company's operational activities are carried out. ROA will be a gauge with the following formula:

$$Return\ on\ Asset : \frac{Net\ Income}{Total\ Asset}$$

Return on Assets : return of profits through managing assets owned by the company

Net Income : total net profit of the company's sales

Total Assets : total assets owned by the company

Statistical Analysis Method

Size of Central Symptom Average. According to Noor (2012: 192), the measurement of this central symptom is "an attempt aimed at measuring the average value of the distribution of data that has been obtained in a study." So this is used to

help calculate the value of each research data variable that has been collected. Moreover, Noor (2012: 192) formulate the calculated average as follow:

$$\text{Average} = \frac{\sum FrXi}{\sum Fr}$$

Where:

Fr = Frequency.

Xi = Middle Value.

Correlation coefficient. According to Sujawerni (2015: 126), the correlation test aims to "test whether or not two variables have a relationship or not". And Sujawerni (2015: 127) wrote method how to find out whether between variables have a relationship with the following conditions:

If Sig > 0.05 then Ho is accepted which means, there is no relationship

If Sig < 0.05 then Ho is rejected, which means there is a relationship.

Coefficient of Determination. To find out how much influence career development (variable X1) and compensation (X2) on work motivation (variable Y), the coefficient of determination is used with the following formula:

$$Kd = r^2 \times 100\%$$

Kd = coefficient of determination

r = Correlation coefficient

Linear regression.

Linier regression formula below was used to foresee the necessity in light of the information previously, or to know the impact of free factor against subordinate variable was to utilize the direct relapse. Direct relapse was separated into two classes, straightforward straight relapse and twofold direct relapse. The utilization of straightforward direct relapse is just for one autonomous variable and ward variable. Nonetheless, twofold direct relapse was utilized for one autonomous variable and at least two ward factors.

Linear regression (Siregar, 2013):

$$Y = a + bX$$

Y = Dependent variable

X = Independent variable

a and b = constanta

Formula to find the value of constanta *b*

$$b = \frac{n \cdot \sum XY - \sum X \cdot \sum Y}{n \sum X^2 - (\sum X)^2}$$

Formula to find the value of constanta *a*:

$$a = \frac{\sum Y - b \sum X}{n}$$

n: total of data

Multiple linear regression. For data analysis, the author uses Multiple Linear Regression analysis. This analysis is used to determine the extent to which the relationship between variables X1, X2 and to the X3 to variable Y. According to Sugiyono (2017: 188), multiple linear regression is obtained by the formula:

$$Y' = a + bX_1 + cX_2 + dX_3$$

Y' = Predicted value

a = Constants or if the price of X = 0

b, c and d = Regression coefficient

X1, X2 dan X3 = Value of independent variables

T Test. The t test proposed by Sugiyono (2017: 179) to test the variable X1, X2 and X3 on to variable Y as follows:

$$t = \frac{\bar{X} - \mu_0}{S}$$

t = t value calculated

\bar{X} = Average Value

μ_0 = Value hypothesized

s = raw deposit sample

n = Number of sample members

F Test. The F test t test proposed by Sugiyono (2017: 179) to test the variables X1, X2 and X3) on the Y variable as follows:

$$F_h = \frac{R^2/k(1-R^2)}{(n-k-1)}$$

Where:

R = multiple correlation coefficients.

K = Number of independent variables.

N = Number of sample members.

Criteria for rejecting or accepting this hypothesis are:

If $F_{\text{count}} > F_{\text{table}}$ then H_0 rejected.

If $F_{\text{count}} < F_{\text{table}}$ then H_0 be accepted.

To perform data processing with analysis and test to be performed, the writer will use the 26th edition of the spss software.

IV. RESULTS AND DISCUSSION

Profitability

From the results of data processing explained that the Return On Asset (ROA) variable has an average value of 0.1364 or equivalent to 13.64%, with a maximum value of 0.53 and a minimum value of 0.02. A company can be declared as having a good return on asset if the percentage exceeds 5.98% (Lukviarman, 2006). Referring to the theory, it can be concluded that the state of Return On Assets of food and beverage product companies is on average in good condition.

Liquidity

The results of data processing revealed that the Current Ratio (CR) has an average value of 2.7381 or standard 273, 81% with a maximum value of 8.95 and a minimum of 0.68. Republic of Indonesia Minister of Cooperatives and SMEs (2006) states that the current ratio is good if the percentage is between 175% -200% while if it is above 200% then it is categorized in a very good condition. Then it can be concluded that the state of the food and beverage product companies studied on average is in very good condition.

Solvency

Meanwhile, the Debt to Asset variable explained that this variable has an average value of 0.4194 or equal to 41.94% with a maximum value of 0.65 and a minimum value of 0.14. According to Kasmir (2008) the company is said to be good if the ratio of Debt to Assets does not exceed 35%. then on average the state of the company under study is not in good condition.

Effect of Liquidity on Profitability

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.793 ^a	.628	.613	.03700

a. Predictors: (Constant), CR

b. Dependent Variable: ROA

The table above shows that the correlation coefficient (r) of 0.793, which means that liquidity has a positive and strong relationship with profitability. And when the financial performance becomes more liquid, profitability also increases. Meanwhile the results of the coefficient of determination (r-square) were found to be 0.628 or 62.8%. This means that liquidity contributes 62.8% to profitability, and the rest is influenced by other variables.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.066	.049		1.347	.191
	CR	.018	.006	.675	2.860	.009

a. Dependent Variable: ROA

Hypothesis test values indicate that the value (sig) of 0.009 < 0.05, which means that liquidity has a significant effect on profitability. Simple linear regression for profitability = 0.066 + 0.018 (liquidity). A constant value of 0.066 can be interpreted that if the value of liquidity is 0 then profitability already has a value of 0.066. And if the value of liquidity increases by 1 unit, the profitability will increase by 0.066, which means that liquidity has a positive contribution to increasing profitability.

Effect of Solvency on Profitability.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.710 ^a	.504	.483	.04276

a. Predictors: (Constant), DTA

b. Dependent Variable: ROA

The table above shows that the value of the correlation coefficient (r) of 0.710, which means that solvency has a level of positive and strong relationship to profitability. Meanwhile the results of the coefficient of determination (r-square) were found to be 0.504 or 50.4%. This means that solvency contributes 50.4% to profitability, and the rest is influenced by other variables.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.066	.049		1.347	.191
	DTA	-.048	.082	-.139	-.591	.560

a. Dependent Variable: ROA

Hypothesis test values indicate that the value (sig) of 0.560 > 0.05, which means that solvency does not significantly influence profitability. Simple linear regression for profitability = 0.066 - 0.048 (Solvency).

Effect of Liquidity and Solvency on Profitability.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.796 ^a	.634	.602	.03751

a. Predictors: (Constant), DTA, CR

b. Dependent Variable: ROA

A constant value of 0.066 can be interpreted that if the value of solvency is 0 then profitability already has a value of 0.066. And if the solvency value increases by 1 unit then profitability will decrease by 0.066 meaning that liquidity contributes negatively to the increase in profitability.

The table above shows that the value of the correlation coefficient (r) of 0.796, which means that liquidity and solvency have a level of positive and strong relationship to profitability. Meanwhile the results of the coefficient of determination (r-square) were found to be 0.634 or 63.4%. This means that liquidity and solvency contributed 63.4% to profitability, and the rest was influenced by other variables.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.066	.049		1.347	.191
	CR	.018	.006	.675	2.860	.009
	DTA	-.048	.082	-.139	-.591	.560

Dependent Variable: ROA

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.056	2	.028	19.920	.000 ^b
	Residual	.032	23	.001		
	Total	.088	25			

a. Dependent Variable: ROA

b. Predictors: (Constant), DTA, CR

Hypothesis test values indicate that the value (sig) of 0,000 < 0.05, which means that liquidity and solvency significantly influence profitability. Simple linear regression for Profitability = 0.066 + 0.018 (Liquidity) - 0.048 (Solvency). A constant value of 0.066 can be interpreted that if the value of liquidity and solvency is 0 then profitability already has a value of 0.066. if the value of liquidity increases by 1 unit, the profitability will increase by 0.066, which means that liquidity has a positive contribution to increasing profitability. And if the solvency value increases by 1 unit then profitability will decrease by 0.066 meaning that liquidity contributes negatively to the increase in profitability.

V. CONCLUSION AND RECOMMENDATION

The empirical studies showed that the company has a good level of liquidity, but solvency has a less good level. On average the company is stated to have a good level of profitability.

Liquidity has a strong and positive relationship with profitability. Likewise, it significantly influences profitability. Liquidity contributed 62.8% to profitability. And linear regression shows the results that each addition of 1 unit of liquidity will increase

the increase in profitability of 0.066. Solvency has a fairly strong and positive relationship with profitability. But it does not affect profitability. Solvency contributes 50.4% to profitability. And linear regression shows the results that each addition of 1 unit of liquidity will increase profitability reduction by 0.066.

Liquidity and solvency have a strong and positive relationship with profitability. Likewise, it significantly influences profitability. Liquidity and solvency contributed 63.4% to profitability. And linear regression shows the results that each addition of 1 unit of liquidity will increase the addition of profitability by 0.066. Meanwhile, each addition of 1 solvency unit will reduce profitability by 0.66

It is suggested that the results of this study can be considered by investors to assess or estimate the possibility of the level of profitability obtained based on the role of liquidity and solvency variables, and also as a reference in determining decisions. It is hoped that the next researcher can test other variables that might affect the company's profitability.

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