THE EFFECT OF SOLVENCY AND LIQUIDITY TOWARDS PROFITABILITY ON MACHINE AND HEAVY EQUIPMENT COMPANIES THAT LISTED IN BEI 2015-2019.

Sabattati Arum Sukemi dan Romulo Sinabutar

Abstract. *Dalam penelitian ini, penulis bertujuan untuk menganalisis pengaruh Solvabilitas dan Likuiditas terhadap Profitabilitas pada perusahaan mesin dan alat berat yang tercantum dalam Bursa Efek Indonesia tahun 2015-2019. Metode yang penulis gunakan ialah metode deskriptif dengan data sekunder yang diperoleh melalui laporan keuangan perusahaan yang tercantum pada Bursa Efek Indonesia. Pengujian dan penelitian ini dilakukan untuk melihat seberapa jauh pengaruh yang diberikan oleh solvabilitas dan likuiditas terhadap Profitabilitas perusahaan. Dari hasil pengujian simultan, didapatkan bahwa Solvabilitas dan Likuiditas sama-sama memiliki pengaruh signifikan terhadap peningkatan Profitabilitas namun jika melalui pengujian parsial hanya Likuiditas yang memiliki pengaruh secara signifikan terhadap Profitabilitas perusahaan mesin dan alat berat yang terdaftar pada Bursa Efek Indonesia pada tahun 2015 – 2019.*

Keyword: *Solvabilitas, Likuiditas, Profitabilitas.*

INTRODUCTION

The times demand companies work effectively and efficiently. Work in the right way at minimal cost in a short amount of time. In some types of work such as construction or mining projects, companies cannot rely on human resources who work empty-handed. Machines and heavy equipment are needed to make the job easier so that it can be completed on time and the company get profit from the work.

In general, the main purpose of forming a company is to get the maximum possible profit so it can provide benefits for the owner. However, when viewed from the principles of financial management, (James, Horne, and Machowiez quoted in Raymond 2017) the company's ability to earn profits is inversely proportional to liquidity. If the company decides to use a large source of funds, its liquidity likely will be in a safe position but this will have an impact on the amount of profit that decreases and vice versa. If a company's liquidity is high, creditors will give a good assessment of the company, because the company is more likely to pay its obligations on time. However, for shareholders, high liquidity is not always profitable because it has the opportunity to create idle funds where these funds should be used to invest in profitable projects. (Mansur, 2015)

The company will do various ways to develop its business. In developing a business, companies need capital. Several things can be done by companies to get a source of funds, namely withdrawal of capital through the sale of shares or from retained company profits. Often companies also borrow funds from banks and non-bank institutions as additional capital. The problem that will arise in this case is when the company uses more debt than capital to develop its business, the solvency will be greater because the interest expense incurred is also higher. Companies that have large debts will certainly add to the burden to pay them back and this will have an impact on the company's profitability to decline.

This is a problem that often arises in companies, namely the inability to balance between pursuing profits with paying obligations and paying off all existing debts. Some companies only focus on getting profit but are less able to manage the company's liquidity and solvency or vice versa, the company is too focused on liquidity and solvency so that profitability is neglected.

With this background, the authors are interested in researching with the title "The Effect of Solvency and Liquidity on Profitability in Machinery and Heavy Equipment Companies listed on the Indonesia Stock Exchange 2015-2019".

Statement of the Problem

Based on this background, the authors identified the problems in this study as:

1. What is the solvency of the machine and heavy equipment companies listed on the Indonesia Stock Exchange in 2015-2019?
2. What is the liquidity of the Machinery and Heavy Equipment Companies listed on the Indonesia Stock Exchange in 2015-2019?
3. What is the profitability of the Machine and Heavy Equipment Companies listed on the Indonesia Stock Exchange in 2015-2019?
4. How does solvency affect the profitability of Machinery and Heavy Equipment Companies listed on the Indonesia Stock Exchange in 2015-2019?
5. How does liquidity affect the profitability of Machinery and Heavy Equipment Companies listed on the Indonesia Stock Exchange in 2015-2019?

Significance and Objectives of the Study

Based on the background of the study above, this research was conducted with the aim of seeing how the level of solvency, level of liquidity, level of profitability, and how the influence and relationship of solvency on the profitability of machinery and heavy equipment companies listed on the Indonesia Stock Exchange 2015-2019.

In addition, it also aims to determine how the influence and relationship of liquidity on the company's profitability.

REVIEW OF RELATED LITERATURE

Solvency

According to (Hery, 2015), the solvency ratio used to measure how far the debt ratio finances the company's assets. A company that uses more debt as a source of funds compared to using its own capital will increase its solvency; in other words, the company is not solvable. The company will be considered solvable when it is able to pay its short-term and long-term debt on time with the company's assets. There are few solvency formulas, such as:

$$\textit{Debt to Asset Ratio} = \frac{Total\ Debt}{Total\ Assets} \text{ x } 100\%$$

$$\textit{Debt to Equity Ratio} = \frac{Total\ Liabilities}{Stockholder's\ Equity} \text{ x } 100\%$$

Liquidity

There are several definitions of liquidity, according to (Riyanto, 2008) liquidity is a matter related to the ability of a company to fulfil its financial obligations immediately. A company will be considered a liquid company if it is able to fulfil its short-term obligations when collected. Likewise, the company will be considered illiquid if it is unable to meet its obligations. Meanwhile, according to (Hery, 2015), the liquidity ratio is the ability of a company to pay short-term debt or obligations. The liquidity ratio also can be used to analyze the financial position of a company for short-term company activities. According to (Halim & Hanafi, 2009) the formulas for calculating liquidity ratios that often used include Current Ratio, Cash Ratio and Quick Ratio.

Current Ratio

Current Ratio, according to (Kasmir, 2013) is a method used by a company to measure its ability to pay short-term obligations or debts that will soon be billed with current assets owned.

Current Ratio formula:

$$\text{Current Ratio} = \frac{(Current\ Assets)}{(Current\ Liability)} \text{ x } 100\%$$

Cash Ratio

According to (Kasmir, 2013) Cash Ratio is a method used to calculate the company's available cash ability to pay off existing debt.

Cash Ratio formula:

$$\text{Cash Ratio} = \frac{\boldsymbol{Cash + Marketable\ Securities}}{\boldsymbol{Current\ Liabilities}}\ \mathbf{x\ 100\%}$$

Quick Ratio

According to (Kasmir, 2013) Quick Ratio is a method used to measure a company's ability to fulfill its obligations to investors without considering the value of the inventory because inventory is a current asset that is difficult to cash in in a short time.

Quick Ratio formula:

$$\text{Quick Ratio} = \frac{(Current\ Assets) - (Inventory)}{(Current\ Liability)}\ \text{x } 100\%$$

Profitability

In general, profitability is known as company profit. According to (Sartono, 2011) profitability is the ability of a company to earn profit in sales, total assets and own capital. The ratio of profit to sales, assets and capital is called the profitability ratio.

According to (Hery, 2015) there are several objectives of calculating profitability, including: As a measuring tool used to determine the company's ability to generate profits in a certain period; To compare the level of profit earned in the previous year and the current year; To see the development of company profits from time to time; As a measuring tool to see how much reasonable net profit is generated from each amount of funds embedded in total assets; As a measuring tool to see how much reasonable net profit is generated from each amount of funds embedded in total equity; As a tool for calculating the gross profit margin from net sales; As a tool for calculating the operating profit margin from net sales; and as a tool for calculating the net profit margin from net sales.

The profitability ratios that are often used include: operating profit margin, net profit margin, return on investment, return on equity, and return on assets.

<u>Operating Profit Margin</u>

This ratio is used to show the gross profit from sales made by the company.

Profit Margin formula:

$$OPM = \frac{Net\ Operating\ Income}{Sales}\ \text{x } 100\%$$

<u>Net Profit Margin</u>

According to (Kasmir, 2010) a company with good management, of course, will set aside a margin to be given to the owner of the company and on the other hand still set aside a margin as a source of company funds. Then this formula is used to compare the total net profit margin and the company's total revenue:

$$NPM = \frac{Net\ Profit}{Net\ Sales} \text{ x } 100\%$$

Return on Investment

According to the view (Kasmir, 2010) ROI is the return on investment on the total assets used. This ratio can be calculated using the formula:

$$ROI = \frac{Net\ Profit}{Cost\ of\ Investment} \text{ x } 100\%$$

Return on Equity

According to (Kasmir, 2010) ROE provides insight into how far the company can effectively manage its own capital. This ratio is also used to measure the amount of profit from investments made by capital owners. The formula used to calculate ROE is as follow :

$$ROE = \frac{Net\ Income}{Shareholders'Equity} \text{ x } 100\%$$

Return on Total Asset

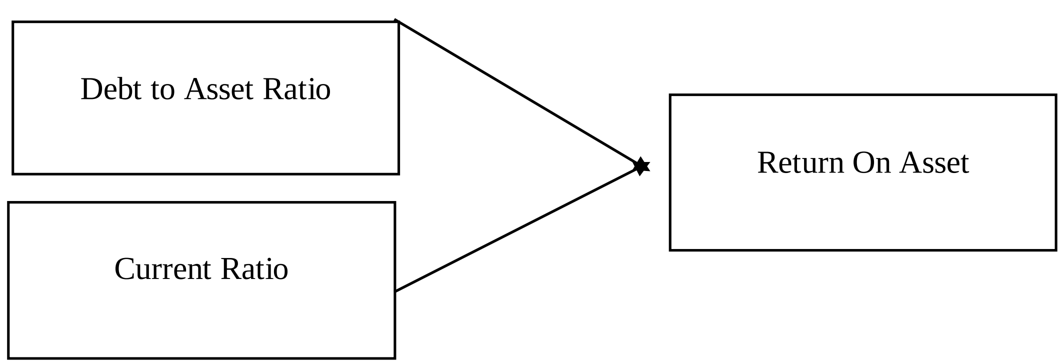
Return on Assets (ROA) serves to measure the company's ability to use all its assets for profit (Kasmir, 2010). The ROA formula is:

$$ROA = \frac{Operating\ Income}{Total\ Assets} \text{ x } 100\%$$

Conceptual of Frame Work

In the conceptual framework, the writer will examine the relationship between debt and assets for variable X1. while the X2 variable will examine the relationship between current assets to current liabilities. Then variable X1 and variable X2 will be examined for their effect on the rate of return on assets. The conceptual of a framework can be seen in the figure as follows:

Figure: Conceptual of Frame Work



RESEARCH METHODOLOGY

Research is carried out to solve a problem and to develop knowledge. When conducting research, a method or method is needed to obtain data, and then the data will be processed so that a result will be used for a specific purpose.

In this study, the authors used a descriptive method with secondary data. According to (Sugiyono, 2012) the descriptive method is statistical, aiming to describe or provide an overview of the object under study through data or samples collected without conducting analysis and making generally accepted conclusions. In this case, the descriptive method used aims to predict how far the influence will be generated by the independent variables, namely Solvency (X1) and Liquidity (X2) on the dependent variable, namely Profitability (Y). According to (Sugiyono, 2012) secondary data is data obtained through reading, studying, and understanding books, documents, and literature. This study's secondary data sources were obtained through the financial statements of companies listed in the Indonesia Stock Exchange. The object is a machine and heavy equipment company listed on the Indonesia Stock Exchange from 2015 to 2019.

In processing the data, the author uses the 25th edition of SPSS software. Data analysis used in this study to test the data analysis requirements are: Descriptive Statistical Analysis, Classic Assumption Test, Normality test, Heteroscedasticity test, Multicollinearity test, Hypothesis Testing including t-test (partial test), and F test (simultaneous test)

RESULT AND DISCUSSION

F Test

The F test is carried out to see whether all the existing independent variables have joint influence on the dependent variable. Based on the results obtained through the F test above, it was found that Sig = 0.003 means that Sig < (smaller) than 0.05. So it can be concluded that the Independent variables, namely Solvability and Liquidity, both have a significant effect on the Dependent variable, which is Profitability. Therefore, hypothesis 3, which states that solvency and liquidity both significantly affect increasing profitability is accepted.

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.048	2	.024	14.657	.003[b]
	Residual	.011	7	.002		
	Total	.059	9			

a. Dependent Variable: Y1_ROA
b. Predictors: (Constant), X2_Current Ratio, X1_DER

T Test

CCoefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	T	Sig.
1	(Constant)	-.206	.070		-2.931	.022
	X1_DER	6.756E-5	.004	.004	.018	.986
	X2_Current Ratio	.144	.038	.902	3.820	.007

a. Dependent Variable: Y1_ROA

A T-test was carried out to show how the effect of each independent variable on the dependent variable. The T-test above showed that X1 has a significant level of 0.986, which means> (greater) than 0.05. So hypothesis 1, which states that solvency has a significant effect on increasing profitability, is rejected because the results of the partial testing state that solvency does not have a significant effect on company's profitability.

In contrast to solvency, the results of the T-test show that liquidity has a significant level of 0.007, which means <(smaller) than 0.05. Then hypothesis 2, which states that liquidity has a significant effect on increasing profitability is accepted because the test results state that the company's liquidity has a significant effect on the company's profitability.

The Effect of Solvency and Liquidity on Profitability

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.898[a]	.807	.752	.04035

a. Predictors: (Constant), X2_Current Ratio, X1_DER
b. Dependent Variable: Y1_ROA

Based on the test results above, it can be seen that the value of the correlation coefficient (r) of 0.898, this indicates that solvency and liquidity both have a strong and positive influence on company profitability. Besides that, the coefficient of determination (r-square) results were found to be 0.807 or 80.7%. So it can be interpreted that Solvency and Liquidity have an effect of 80.7% on profitability. Then hypothesis 3 is accepted.

CONCLUSION AND RECOMMENDATION

Conclusion

Solvency is the company's ability to pay off the debt it has. Solvency is the most important ratio in a company because working capital can come from debt and has a close relationship with liquidity.

Liquidity is the company's ability to pay off its obligations with the assets it owns. Liquidity measures current liabilities by the assets it owns. Liquidity and solvency also affect the company's profitability or profitability.

From the results of the F-test or the simultaneous test that has been carried out, it concludes that the independent variables, namely Solvency (X1) and Liquidity (X2), have a significant effect simultaneously on the dependent variable, namely Profitability (Y). Therefore, hypothesis 3 which states that liquidity and solvency have a negative effect on increasing profitability is accepted.

From the results of the T-test or partial test above, it is concluded that only Liquidity (X2) which has a significant effect on the dependent variable, in this case, is Profitability (Y). So hypothesis 1 which states that solvency has a significant effect is rejected and hypothesis 2 which states that liquidity provides a significant effect is accepted.

Recommendation

1. The company is expected to maintain and increase the Current Ratio or liquidity because, based on the test, it looks that the Current Ratio has a considerable effect on its profitability. The current Ratio describes a company's ability to pay its current liabilities with its current assets.
2. For further researchers, it is hoped that they can develop this research by using variables that have not been listed in this study. If possible, further researchers can also use other research objects to find out the comparison results.
3. For potential investors who will invest and investors who have invested in the company, it is hoped that they do not only focus on the analysis carried out in this study because there are still other factors that can affect the company's value explained in this study.

References

Halim, A., & Hanafi, M. M. (2009). *Analisis Laporan Keuangan.* Yogyakarta: UPP STIM YKPN.

Hanie, U. P., & Saifi, M. (2018). Pengaruh Rasio Likuiditas dan Rasio Leverage terhadap Harga Saham. *Jurnal Administrasi Bisnis*.

Hery. (2015). *Analisis Laporan Keuangan* . Jakarta: PT Grasindo.

Kasmir. (2010). *Pengantar Manajemen Keuangan.* Jakarta: PrenadaMedia Group.

Kasmir. (2013). *Analisis Laporan Keuangan* . Jakarta: PT Raja Grafindo Persada.

Mansur, K. (2015). *Pengaruh Likuiditas dan Solvabilitas Terhadap Profitabilitas* . Semarang: Universitas Islam Negri Walisongo.

Raymond. (2017). Pengaruh Likuiditas dan Solvabilitas Terhadap Profitabilitas pada PT Indosat TBK. *Jurnal Ilmiah Manajemen UPB.*

Riyanto, B. (2008). *Dasar-dasar Pembelajaran Perusahaan.* Yogyakarta: BPFE.

Sartono, A. (2011). *Manajemen Keuangan Teori dan Aplikasi.* Yogyakarta: BPFE.

Sugiyono. (2012). *Metode Penelitian Kuantitatif Kualitatif dan R&B.* Bandung: Alfabeta.