

Effect Of Working Capital Efficiency, Liquidity And Leverage Against Profitability

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Abstract. The purpose of this study is to determine how leverage, liquidity, and working capital efficiency affect the company's profitability. This population is used to search for reports on infrastructure businesses listed on the Indonesia Stock Exchange from 2017 to 2021 in this study using a quantitative methodology. A total of 185 samples, or 37 companies, were collected using a purposive sampling strategy. To access secondary data in the form of financial reports for businesses, data collection is done by collecting data that has been archived in the database. Statistical descriptive analysis, estimating model selection (Chow, Hausman, and range multiplier test), classical assumption test (multicollinearity, heteroscedasticity, and panel data regression), and hypothesis testing is used to analyze the data (coefficient of determination test and partial test). The results of this study indicate that Working Capital Efficiency (Working Capital Turnover) and Liquidity (Current Ratio) have no significant positive effect on Profitability (Return On Investment). This research also found that leverage (debt to equity) had a significant negative effect on profitability (return on investment).

Keywords: *Efficiency Working Capital, Liquidity, Leverage, and Profitability*

1 Introduction

Indonesia's economic growth in September was 4.73%, still below expectations. For Indonesia to become a developed country in 2025, its growth needs to be around 7%.¹ One of the obstacles to the Indonesian economy is the slowdown in infrastructure development which is identified by the lack of quality and quantity of infrastructure or infrastructure. Inadequate infrastructure can reduce Indonesia's investment attractiveness. Around 17% of all business spending in Indonesia, according to data from the Indonesian Chamber of Commerce and Industry (Kadin Indonesia), is used for logistics expenses. This is what makes investors to think again before deciding to invest in Indonesia.²

¹<https://kppip.go.id/about-kppip/perkembangan-pembangun-infraktur-di-indonesia/>

²<https://www.indonesia-investments.com/id/bisnis/risiko/infraktur/item381?>

Every industry strives to get the maximum profit for the survival of the company in the future. Financial statement information can tell us about the financial condition of a company, because these statements reveal how well the company is doing in generating profits in its industry.

Working capital efficiency is one of the policies faced by the industry. "Working capital management is important for companies because it has an impact on how much money the company must use, as well as how to finance its current assets. Companies that cannot manage working capital well are likely to experience insolvency and are forced to liquidate, and vice versa if the company faces overliquid it can cause idle funds so that there is inefficiency in the company and results in wasting opportunities to earn profits (Rofiah, Mardani, & Wahono, 2017).

The ability of this sector to repay short-term debts that are maturing is indicated by its level of liquidity. A higher level of liquidity indicates a solid financial situation for the organization. (Wijaya & Isnani, 2019). Another factor that has an impact on the company's profitability is the ability to meet its long-term liabilities.

This research is the development of Samo & Murad (2019). This research is different from previous research. The difference is that the researcher tries to change the initial sample from agricultural companies in Pakistan to infrastructure companies listed on the Indonesia Stock Exchange (IDX) and also adds one independent variable, namely Working Capital Efficiency. The period in this study is from 2017-2021.

2 THE CRITICAL REVIEW

2.1 Signaling Theory

The actions of company management sending signals to investors about how to assess the company's prospects are referred to as Spence's (1973) signal theory. In general, this hypothesis has a close relationship with the accessibility of information. Knowing the relationship between research and this theory is shown through financial statement information which is interpreted as a signal of bad news or good news. Financial statements are the most important part in a company's fundamental analysis and are also used by investors as decision-making material. So from the beginning the company was asked to make financial statements correctly.

2.2 Financial Statement Analysis

Financial statements prepared for evaluate and assessing the company's financial performance in the future. The purpose of this analysis is to identify deficiencies in financial data that can be a problem for the company, and to identify strengths that can become advantages (Martono & Hartijo, 2011).

2.3 Working Capital Efficiency

Capital work is assets smoothly owned company after deducting current liabilities. Efficiency working capital is the best use of working capital for the company's operational activities so as to improve the overall welfare of the industry whole. Optimal capital management can provide benefits (Syamsuddin, 2016).

2.4 Liquidity Ratio

This ratio refers to company ability in paying obligations short term. It means when the debt that has fallen time the company is able to fulfill it. The usefulness of this ratio is to estimate how liquid the company is. A company is said to be liquid if it is able to fulfill its obligations and vice versa (Rofiah, Mardani, & Wahono, 2017).

2.5 Leverage Ratio

This ratio is calculated to find out how much debt is used to finance company assets. This refers to how much debt a business has compared to its assets. The leverage ratio shows the capacity of the sector to meet all of these financial commitments (Yanti & Oktari, 2018).

2.6 Profitability Ratio

The ability of a business to generate profits over a period of time by using productive assets or capital, either fully or with its own funds. Profitability analysis is very important for creditors and equity investors, as it can help them to understand the health of the company and future prospects. Because profit is a determining factor for changes in the value of securities. How's the profit "it can" maximizing "holder stock is an important task for the company (Miswanto, Abdullah, & Suparti, 2017).

2.7 HYPOTHESIS DEVELOPMENT

Based on previous research, the researcher outlines several hypotheses as follows:

H₁ : *Working Capital Turnover* significant positive effect on Return On Investment

H₂ : *Current Ratios* significant positive effect on Return On Investment

H₃ : *Debt to Equity Ratio* no effect significant negative on Return On Investment.

3 RESEARCH METHODS

"Researchers apply quantitative methods in this study. Ratio data is a type of data which used . Data secondary is type information obtained by researchers through sources indirect , like other people or written material. The information is obtained from the financial statements business actors in the infrastructure sector that can be accessed on the Indonesia Stock Exchange (IDX) website at www.idx.co.id.

3.1 Operational definition

3.1.1 Independent Variable

Debt to equity ratio, current ratio, and working capital turnover are independent variables in this study.

- 1) *Working Capital Turnover*, a ratio that assesses the correlation between sales and average working capital.

$$WCTO = \frac{Net\ Sales}{Current\ Assets - Current\ Liability}$$

Source: Widiyanti & Bakar (2014)

- 2) *Current Ratio*, ratio used to evaluate the company's capacity to pay short-term debt.

$$CR = \frac{\text{Current Assets}}{\text{Current Liability}}$$

Source: Samo & Murad (2019)

- 3) *Debt to Total Equity*, a measure to assess how much a company uses debt and what the company's debt and equity composition looks like.

$$DER = \frac{\text{Total Liability}}{\text{Total Equity}}$$

Source: Samo & Murad (2019)

3.1.2 Dependent Variable

- 1) *Return On Investment*, Calculate the rate of return on assets that the company uses in its operations to make money.

$$ROI = \frac{\text{Income After Tax}}{\text{Total Assets}} \times 100\%$$

Source: Samo & Murad (2019)

3.2 Sampling Technique

In selecting the sample, the researcher used a purposive sampling strategy, namely the selection of samples based on predetermined standards. Sampling was carried out according to a number of criteria to help the sample used in the study address the problem and offer appropriate value. The following are the criteria for the research sample:

- 1) Infrastructure sector companies listed on the Indonesia Stock Exchange in 2017-2021.
- 2) Provide complete financial reports.
- 3) Presenting financial statements in Rupiah (Rp).

3.3 Collection and Processing Techniques

Data collection using techniques archive data collection on database to obtain secondary data in the form of financial reports taken from the annual report. Data processing using Microsoft Office Excel. Next, it will be tabulated to provide the necessary summary. Eviews software will be used to evaluate the data statistically.

Processed data first by using an analytical approach before being interpreted. With this, the author's research questions can be overcome by the results of data processing. The panel data regression equation in the Eviews application will be used because the data used is panel data. The steps in data analysis are: Analysis "Descriptive Statistics," Determination of Estimated Capital (Test) "Chow, Hausman Test and Langrange Multiplier Test), Test "Classical Assumptions (Multicollinearity, Heteroscedasticity, and Panel Data Regression), Hypothesis Testing ("Coefficient of Determination Test and Partial Test).

4 RESULTS AND DISCUSSION

The sample studied in research is IDX-listed infrastructure companies in the 2017-2021 period. The research sample companies were selected based on predetermined criteria. The following are the results of the amount of data collected under study:

Table 1. Number of Research Samples

| Criteria | Number of Companies |
|---|---------------------|
| Infrastructure Sector Companies 2017 - 2021 | 58 |
| Incomplete Financial Report | -19 |
| Not Using Rupiah Currency | -2 |
| Complete Company Data | 185 |
| (37 companies times 5 years) | |

Source: Processed By Researchers

In table 4.1 there are 58 industries listed on the IDX in 2017-2021. There are 185 companies that meet the criteria for the research sample, which is sufficient to form a statistically valid sample.

4.1 Descriptive Analysis

The process of collecting, sorting, and processing data to create statistical measures are known as descriptive statistics. The mean, maximum, minimum, and standard deviation values indicate how the data is described.

Table 2. Descriptive Analysis

| | ROI | WCTO | CR | DER |
|------------------|------------|------------|-----------|-----------|
| mean | 0.005503 | 1,041,951 | 1,154,922 | 2,698,124 |
| Maximum | 1,000,000 | 3,837,470 | 1.026.010 | 1,498,690 |
| Minimum | -3,094,000 | -2,420,480 | 0.027 | 0.003 |
| Std. Dev. | 0.271239 | 3,879,390 | 8,271,731 | 1,126,766 |

Source: Output Eviews 9

4.2 Eviews Model Test Results

Chow test

Table 3. Chow test

| Effects Test | Statistics | df | Prob. |
|---------------------------------|-------------------|-----------|---------------|
| Cross -Section F | 1,977,447 | (36, 145) | 0.0025 |
| Cross-section Chi-square | 73,891,781 | 36 | 0.0002 |

Source: Output Eviews 9

The Chi-Squares value in the table above has a value of 0.00021 < 0.05. The findings of the Chow test show that the fixed effect model is preferable to the common effect model. Consequently, the Hausman test should be used to select the best model.

Hausman test

Table 4. Hausman test

| Test Summary | Chi-Sq. Statistics | Chi-Sq. df | Prob. |
|----------------------|--------------------|------------|---------------|
| Random cross-section | 2,207,162 | 3 | 0.5305 |

Source: Output Eviews 9”

In the table above, the cross-”*random section* is 0.5305. The findings of the Hausman test show that the significance is > 0.05, so the selection of the right model is the random effect model. Because the results of the Chow test and the Hausman test show 2 different models, it is necessary to do the Langrange multiplier test”.

Langrange Multiplier Test

Table 5. Langrange Multiplier Test”

| | Cross-section | Test Hypothesis Time | Both |
|---------------|---------------|----------------------|------------------|
| Breusch-Pagan | 8,949,512 | 0.372518 | 9.322.030 |
| | -0.0028 | -0.5416 | -0.0023 |

Source: Output Eviews 9”

”The Breusch-Pagan value in the table above is 0.0023. Then the results of the LM test show that the significance is < 0.05 so that the selection of that model right is *random effects model*. Results test hausman dan the langrange multiplier test both showed that the right model was the random effect model.

4.3 Classical Assumption Test

Multicollinearity Test

Table 6. Multicollinearity Test

| | WCTO | CR | DER |
|------|------------------|------------------|------------------|
| WCTO | 1,000,000 | -0.002561 | -0.012052 |
| CR | -0.002561 | 1,000,000 | -0.031541 |
| DER | -0.012052 | -0.031541 | 1,000,000 |

Source: Output Eviews 9”

”Based on the data in table 6, it can be seen that the correlation coefficient between variables is not too high. This signifies in”In this study, there were no symptoms of multicollinearity.

Heteroscedasticity Test

Table 7. Heteroscedasticity Test

| Heteroskedasticity Test : Glejser | | | |
|--|-----------|---------------------|---------------|
| F-statistics | 0.183741 | Prob. F(3,181) | 0.9073 |
| Obs*R-squared | 0.561694 | Prob. Chi-Square(3) | 0.9051 |
| Scaled explained SS | 1,367,174 | Prob. Chi-Square(3) | 0.7132 |

Source: Output Eviews 9”

Based on table 7 can"it can be concluded that the value of *R-squared is 0.9051, which means that > 0.05, the data is free from heteroscedasticity symptoms.

4.4 Panel Data Regression

In panel data regression the author has found that the data will be processed using REM, then the REM formula is as follows:

$$ROI_t = \alpha + \beta_1 WCTO + \beta_2 CR + \beta_3 DER + \varepsilon_t$$

The results of panel data regression using REM can be seen in the table below.

Table 8. Random Effect Model

| Variable | Coefficient | t-statistics | Prob. |
|--------------------|--------------------|---------------------|--------------|
| C | 0.008775 | 0.32774 | 0.7435 |
| WCTO | 0.0000718 | 0.143801 | 0.8858 |
| CR | 0.0000445 | 0.174019 | 0.862 |
| DER | -0.001431 | -0.821895 | 0.4122 |
| R-Squared | | | 0.003853 |
| Adjusted R-squared | | | 0.247181 |
| Prob (F-Statistic) | | | 0.863853 |
| N | | | 185 |
| Model Test Results | | | Random |

Source: Output Eviews 9”

From the results of the panel data regression, the following equation is obtained:

$$ROI = 0.008775 + 0.0000718 WCTO + 0.000445 CR - 0.001431 DER$$

4.5 Hypothesis Testing

Coefficient of Determination Test Results (R²)

Identify the influence of the model on the research variables. Table 9 above provides the findings of the coefficient of determination of the ROI variable which shows the adjusted R-squared value of 0.247181 or 24.72%. This shows that only 24.72% of the variable variance can be used to explain the independent variables, while the remaining 75.28% is explained by factors that are not related to the research model.

Partial Test Results (T Test)

The t-test was conducted to test the effect of the dependent variable on the independent variable. Decision to accept and reject by looking at the probability value. The decision making criteria is if the probability value is < 0.05 then these variables have a significant effect. However, if the probability value is > 0.05 then the variable has no effect.

Table 10. Panel Data Regression

| Variable | Coefficient | t-statistics | Prob. |
|----------|-------------|--------------|---------------|
| C | 0.008775 | 0.32774 | 0.7435 |
| WCTO | 0.0000718 | 0.143801 | 0.8858 |
| CR | 0.0000445 | 0.174019 | 0.8620 |
| DER | -0.001431 | -0.821895 | 0.4122 |

Source: Output Eviews 9

5 DISCUSSION

Effect of working capital turnover on return on investment

Considering the probability value of 0.8858 is higher than the 0.05 significance, then the H_1 test is not supported. The coefficient value of 0.0000718 indicates a positive trend in the relationship between working capital turnover with probability but WCTO is not the main factor that affects ROI because the effect is not significant. This can be interpreted as the size of the level of capital efficiency work will not affect the level of profitability.

Working Capital Turnover (current assets and current liabilities) have an impact on the company's working capital turnover in terms of generating sales. High industrial sales volume will make working capital faster and return to the company. This causes high profits and has an effect on increasing company profitability. However, with an increase in the company's sales it makes profitability decrease. Due to the higher increase in production costs, the products sold, generate lower profits and lower profitability (Sriwananda, et al, 2021).

The duration of working capital turnover also has an impact on the level of company profitability. Faster cash flow will occur if credit sales policies are given more quickly. This can make the period of deferral of debt to suppliers also fast, so that the proceeds from the sale are not directly managed into capital but pay the obligations first. In another sense, the money that comes in should be managed into sales capital, will but have to pay debts to suppliers so that the profit obtained also decreases. These findings are in line with research by Ristanti & Sulasmiyati (2015) and Sriwananda, et al (2021).

Effect of current ratio on return on investment

Given the probability value of 0.8620 which is higher than the 0.05 significance, then the H_2 test in the table above indicates that is not supported. Score coefficient of 0.0000445 indicates a positive direction which states the relationship between CR and ROI is unidirectional but CR is not the main factor affecting ROI because the effect is not significant.

The level of liquidity does not always guarantee that it will increase or decrease the company's profitability. Because each company has a different analysis related to the value of the current ratio. The company considers the smooth payment of debt can not be used as a benchmark for the value of the company. because liquidity is only a description of the smoothness of the company in paying short-term obligations so that it has nothing to do with company

profitability. This is also in line with the research produced by Noor & Lodhi (2015) and Alarussi & Alhaderi (2018). They stated that there is a positive and insignificant relationship between CR and profitability

The effect of debt to equity ratio on return on investment"

Based on testing H_3 in table 11 above results that H_3 is not supported because the probability value is 0.4122 which is greater than the 0.05 level of significance. Coefficient value-0.001431

Shows a negative direction which indicates the relationship between the two is opposite, if DER increases, ROI decreases. Researchers say if the company has a high DER value, the company's profits will be focused on paying obligations rather than adding company assets.

A low DER value indicates that the company is able to manage its debt well or in another sense the company's finances are healthy. Furthermore, investors are more interested in low DER conditions because the risks they carry out are lower. The lower the DER value, the more investors will want to buy the stock. The results of this study are in line with Ludijanto, et al (2014) and Rusnaeni, (2018) show that DER has a significant negative effect on ROI.

6 CONCLUSIONS AND SUGGESTIONS

Conclusion

Conclusion on research This is based on the discussion in the previous chapters, which are as follows:

1. *Working capital turnover*, no has a positive and significant effect on Return on Investment
2. *Current ratio* does not have a positive effect on Return on Investment
3. *Debt to Equity Ratio* have influence negative on Return on Investment.

Limitations

In penlitian is penlit realizes that there are some limitations as follows:

- 1) Limitations of dalam the time span of the study which could possibly be extended for more relevant results.
- 2) This study only uses a sample of companies in the Infrastructure sector that are listed on the IDX.
- 3) There are other independent variables that may be relevant to Return on Investment that are not used in this study.

Suggestion

Based on the research described above, the following suggestions are given for further research:

- a. The next researcher can discuss this topic again by using a longer research time span so that the research results can be better accurate.
- b. Future researchers can use samples of companies in other sectors with the aim of providing updates on this topic.

- c. Can find and use other independent variables that are relevant to Return On Investment that may not be investigated in this study so that this topic continues to develop.

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