# Assesstment of Working Capital in the Plantation Sector Based on ROI, ROA and ROE Management Analysis

Lenawati Haryanto <sup>a1\*</sup>, Fransiska Rosa Mastina <sup>b2</sup>

<sup>1</sup> Universitas Esa Unggul, Jl. Arjuna Utara No.9, Kebon Jeruk, Jakarta 11510

<sup>1</sup> lenawati.haryanto@esaunggul.ac.id <sup>2</sup> rosassimbolon@gmail.com

\*Corresponding Author : Lenawati Haryanto

#### ARTICLE INFO

## ABSTRACT

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## **1. INTRODUCTION**

The purpose of this study was to analyze Working Capital Management to assess ROI, ROA, and ROE in the Plantation Sector. This study consists of three independent variables consisting of ROI, ROA, and ROE, and one dependent variable, namely Working Capital. In this study there were 27 companies that met the criteria from a total of 32 observations with the object of research in the plantation sector plantation companies listed on the Indonesia Stock Exchange (IDX) during the period 2020 to 2022. the results of this study indicate that the ROI variable has a negative effect on working capital. ROA variable has a positive effect on working capital. ROE variable has a positive effect on working capital. This research can also be taken into consideration for investors and shareholders to be more careful in receiving financial statement information provided by the company in making decisions.

Businesses in the era of globalization face increasingly fierce competition, which requires companies to use their working capital carefully. Company working capital management helps increase company profits and influences decision making (Ginting, 2018). Effective working capital management can contribute to growing company profitability. This shows that maintaining optimal working capital levels can positively affect the company's financial performance (Yuliani et al., 2021) In economic activities, the profitability ratio is very important because it will provide information on how the company can develop in the long term. In measuring profitability, companies can use the ratios on ROI, ROA, and ROE (Al-Momani et al., 2021). In the midst of a dynamic and challenging market, companies in the plantation sector often need to adapt swiftly to ongoing changes. Price uncertainties of commodities, along with pressures from high debt levels, create a scenario where sound decision-making becomes increasingly critical. With a growing focus on sustainability, companies are required to make prudent investments. In this context, a deep understanding of the factors influencing profitability and resource management becomes invaluable. Exploring the relationships between various financial ratios can provide useful insights for management in crafting strategies that support growth and stability amidst fierce competition.

Working capital optimization means minimizing working capital needs and maximizing company revenue. Therefore, effective working capital management is very important in maintaining liquidity, solvency, consistency, profitability, and business value (Aldubhani et al., 2022) Working capital refers to funds used by a company to manage day-to-day operations, including to pay short-term expenses such as salaries, inventory, and other operating expenses. Working capital is calculated as current assets minus current liabilities and is a measure of a company's liquidity and ability to meet short-term financial obligations (Mardones, 2022).

The percentage of profit that can be obtained from the total amount of assets invested. ROI shows how effectively a person or company invests its funds. It also shows the company's ability to generate profits from the assets used (Sugiarti et al., 2022).

ROA affects working capital by indicating that the higher the working capital, the higher the company's profit return. This shows that increasing working capital can lead to an increase in ROA. The

higher the ROA, the more efficient the use of the company's assets, meaning that large profits can be generated with the same amount of assets (Patricia Saragih et al., 2023). Companies earn more profits and are in a better position in terms of asset utilization when their ROA is higher (Waweru & Atheru, 2022).

ROE is the company's ability to generate profits available to the company's shareholders. This ratio is influenced by the size of the company's debt, if the proportion of debt is large, then this ratio will be large (Asiedu et al., 2020). ROE is used to determine how much return on investment investors get. ROE is calculated by dividing net profit by shareholder equity and is an important factor in the company's financial performance and efficiency in utilizing shareholder funds (Abuhommous et al., 2022).

Research (Aminus et al., 2023) explains that The Effect Of Return On Assets And Return On Equity To Working Capital At Pt. Adaro Energy Tbk. However, what distinguishes this in the study is by adding the ROI variable and the plantation sector. The reason the author chose the ROI variable is important to study in the study because the financial performance measure is very relevant in analyzing the Company's performance. When the ROI variable is analyzed simultaneously, it will provide insight into the Company's financial performance and how working capital strategies can affect investment returns and the use of owner capital.

The purpose of the study is to examine the influence of ROI, ROA, and ROE on working capital in the Plantation Sector, both partially and simultaneously. The benefits of the following research are so that it can. helps the Company better understand how working capital can affect profitability ratios such as ROI, ROA, and ROE. This can help the Company's management in making better decisions regarding financial and investment strategies.

## 2. METHOD

## Signaling Theory (Signal Theory)

The Signaling theory explains that information created by companies, especially financial reports, is very useful in influencing potential investors' decisions to invest in a company (Spence, 1973). Signaling theory assumes that it is important to signal investors about how they view the company's prospects (Puspitaningtyas, 2019). For example, a high current ratio indicates good assurance in paying off short-term financial obligations, which is a positive signal. Conversely, a high debt to total asset ratio indicates higher risk, which is a negative signal. This theory helps investors interpret these signals to make the right decisions (Agustin et al., 2023).

## Working Capital

Working capital is one of the most important components that determine business continuity. Working capital is defined as the available capital that is used to assist operations. Working capital can be calculated by subtracting the company's current liabilities and current assets. Positive working capital usually indicates that the company is able to pay short-term obligations (Aldubhani et al., 2022). Working capital represents the funds available for daily business operations, including managing short-term expenses such as salaries, inventory, and other operating costs. Good working capital management is crucial in ensuring smooth business operations and financial stability (Nastiti et al., 2019). Efficient working capital management is crucial to ensuring smooth operations and can have a significant impact on the profitability and financial health of the company (Oweis, 2020).

## **Return On Investment (ROI)**

This indicator provides an overview of how much profit is obtained from each fund invested in the company. ROI is also used as an indicator of financial performance. ROI analysis in financial analysis has an important meaning that is used as a comprehensive financial analysis technique. Financial metrics used to assess investment profitability by comparing the profit or loss of an investment compared to its costs (McGowan et al., 2019). Usually expressed as a percentage and used to assess the efficiency or profitability of an investment or to find differences in the effectiveness of various investments (Smith, 2023).

#### Return On Assets (ROA)

This ratio shows the results of the amount of assets used in the company and is an indicator of how effective management is in managing its assets. ROA is one of the profitability ratios used to measure net profit obtained from the use of assets (Julianti & Masditok, 2023). A higher ROA indicates that the company is more efficient in utilizing their assets to make a profit (Septyanto & Welandasari, 2020). ROA can be found by dividing the company's net profit by the total amount of assets, and then shown as a percentage. In the scope of the study, the asset value (ROA) was found. has a relevant positive impact on the growth of profits of companies listed on the Indonesia Stock Exchange in the transportation sector (Siswanto et al., 2022). The ROA indicator can support companies that use good accounting practices to determine the effectiveness of capital use, which can affect the company's financial condition. Thus, it is important to maintain the stability of company size and proper debt management to optimize ROA (Shahfira & Hasanuh, 2021).

#### Return on Equity (ROE)

If the company's capital is invested in assets to generate profits, the business venture can be said to be optimal. The purpose of this mechanism is to determine and calculate the rate of return on capital from shares invested with income or profit. Company performance is considered good if it has a high ROE value. The higher the ROE level of a company, the higher its stock price. ROE is used to determine how much return on investment investors get. ROE is calculated by dividing net profit by shareholder equity and is an important factor in a company's financial performance and efficiency in utilizing shareholder funds (Abuhommous et al., 2022). ROE has a positive and relevant effect on stock prices. Income per share or Earning per share a is a form of profit offering to shareholders owned (Choiriyah et al., 2021).

#### **Relationship Between Variables and Hypothesis Development**

#### Influence of ROI on Working Capital

ROI plays an important role in measuring a company's ability to generate profits that are used to cover the investments made. (Sipayung et al., 2019). The higher the ROI, the better the company. There are many studies that look at how ROI correlates with working capital. When ROI is high, it indicates that the company is effectively utilizing its assets to generate profits, which can have a positive impact on working capital (Hasanah, 2022). But inadequate or excessive working capital can lead to inefficiency and reduce profits. Therefore, it is very important for businesses to manage elements such as cash, receivables, and investments well(Edouard, 2021). Optimal working capital management means minimizing working capital needs and maximizing company revenue. This is in line with research by Aminus et al., (2023), Meah et al., (2021) and Morshed, (2020) which states that the relationship between ROI and working capital is interrelated, because effective working capital management can have a positive impact on profitability and company value, which ultimately affectsROI (Kasim et al., 2021).Based on the description above, the following hypothesis can be formed:

H1: ROI has a positive effect on Working Capital

#### The Effect of ROA on Working Capital

The company's ability to generate profits in a certain period and develop dynamically which changes over time is also known as ROA (Dede Suharna & Augustina Kurniasih, 2022). Likewise, Dalci et al., (2019) found that the relationship between ROA and working capital was not linear, and the best level of working capital depended on the size of the business and the cycle. cash conversion, which shows the relationship between higher profitability and the ratio of current assets to total assets. This shows that the business cycle can affect the relationship between ROA and working capital, which has the potential to affect financial performance. (Sini & Nainggolan, 2023). This is in line with research by Aminus et al., (2023), Ilham et al., (2022), and Siddiqui & Abdullah, (2019) which states that the relationship between ROA and a significant positive relationship on working capital. Based on this explanation, the following hypothesis can be formed:

H2: ROA has a positive effect on Working Capital.

#### The Effect of ROE on Working Capital

Working capital is essential to finance day-to-day operations and ensure efficient utilization of assets to generate profits. When working capital is well managed, it can result in effective asset turnover and higher profits, thus positively impacting return on equity. Therefore, inefficient use of working capital can contribute to minimizing ROE, indicating that equity is being used ineffectively to generate profits (Mahardini, 2019).

The relationship between ROE and working capital is negative. A study examining the impact of capital structure, working capital, and governance quality on the financial performance of small and medium-sized enterprises in Taiwan found that working capital, represented by the Cash Conversion Cycle (CCC), has a negative impact on the company's financial measures, including ROE (Vu Thi & Phung, 2021). This is in line with the research of Aminus et al., (2023). Based on the description above, the following hypothesis can be formed:

H3: ROE has a negative effect on Working Capital.

#### The Effect of ROI, ROA, and ROE on Working Capital

The influence between ROI, ROA, and ROE on working capital is quite significant (Agurto et al., 2023). The company's financial performance is very positively influenced by the accounting information system, financial reporting analysis, working capital management, and capital structure management (Edouard, 2021). ROE and ROA have a simultaneous influence on company value, which indicates a positive relationship between these variables and the company's value (Anggraini & Yan Nyale, 2022). This is in line with research by Aminus et al., (2023), Yusuf et al., (2021), and Julianti & Masditok, (2023) which states that the relationship between ROI, ROA, and ROE on working capital is interrelated, because it can be seen that there is a relevant relationship between working capital. Therefore, effective working capital management, especially cash, can have a major impact on the company's financial performance (Chintha & Prasad, 2021). Based on this explanation, the following hypothesis can be formed:

H4: ROI, ROA, and ROE have a positive effect on Working Capital

#### **Research Model**

The research model applied in this study will explain the relationship between independent and dependent variables which aims to make it easier for readers to understand the purpose of the study. From the hypothesis above, a research model can be designed that explains the influence of each independent variable on the dependent, namely:



## **3. RESEARCH METHODOLOGY**

This study uses a quantitative method. These operational variables consist of independent variables, namely, ROI, ROA, and ROE proxied by a ratio that shows the effectiveness of a business in

obtaining profit from its assets and shows how much profitability it has. Net profit (ROA) is the amount of net profit divided by all assets, which is represented as a percentage (Tsaqif & Agustiningsih, 2021). A higher ROA level indicates that the company's financial performance is better. ROI according to is a ratio that implies the return on total assets used by the company. ROI is also a measure of management activities in investment management, in addition, the return on investment indicates the level of productivity of the company's total funds, both loan capital and individual capital. The low ratio means it is not good, and vice versa. This means that this ratio is used to measure the effectiveness of all company operations. ROE is usually calculated using accounting performance measures and is calculated as the company's net profit divided by common shareholder equity (Indraswari, T., & Maulana, 2023).

The population in the study is secondary data taken from annual reports on the finances of companies in the plantation sector listed on the Indonesia Stock Exchange (IDX) in the period 2020 to 2022. Purposive Sampling is a method used to obtain samples, which means taking samples with standards determined by the author, namely plantation sub-sector companies that consistently submit financial reports during the period 2020 to 2022. There are 27 companies that meet these criteria from the total observation of 32 non-financial industrial sector companies on the Indonesia Stock Exchange (IDX). So that the sample data used in this study is 81 data.

The technique in this study applies multiple linear regression analysis and uses data processing application software, in this study, the test consists of descriptive analysis statistics; classical assumption tests including normality tests, multicollinearity tests, heteroscedasticity tests, and autocorrelation tests; Hypothesis tests, namely simultaneous statistical tests (F), partial statistical tests (T), and coefficient of determination (Adjusted R Square); and multiple linear regression tests. The multiple linear regression model in this study is formulated as below:

WC =
$$\alpha$$
+ $\beta_1$ ROI + $\beta_2$ ROA - $\beta_3$ ROE +8

## Figure 3. Multiple Linear Regression Model

## **Information :**

toilet	= Working capital
ROI	= Return On Investment
ROA	= Return On Assets
ROE	= Return On Equity
	= Variable or constant number
β1, β2, β3	= Regression coefficient
3	= Error

## **4. RESULTS AND DISCUSSION**

## **Descriptive Statistical Test**

Descriptive Statistics								
N		Minimum	Maximum	Mean	Std. Deviation			
ROI	55	-5.58	14.81	4.4362	4.91671			
ROA	55	-6.73	25.40	6.2920	6.72563			
ROE	55	-140.26	43.87	6.0767	26.30539			
Working capital	55	-623049	658452	37953.95	201690.711			
Valid N (listwise)	55							

#### Table 1. Descriptive Statistical Test

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Statistical tests consist of average, minimum, maximum, and standard deviation values to describe the population of sample data being tested. This study applies three independent variables consisting of ROI, ROA, and ROE, then one dependent variable Working Capital in the non-financial industry sector recorded on the Indonesia Stock Exchange from 2020 to 2022. The sample data of working capital observation or valid N in this study contains 55 data. The minimum value of working capital is -623049 which indicates a lack of capital or debt that is quite large compared to current assets. The maximum value of working capital is 658452 which indicates that there are companies that have current assets that far exceed their short-term liabilities. The average value of 37953.95 describes the condition of working capital. A positive average indicates that overall, the current assets of these companies are higher than their current liabilities. The standard deviation of 201690.711 indicates that there is quite a large variation in working capital. Some companies may be very liquid, while others may face serious liquidity problems.

The ROI observation sample data or valid N in this study contains 55 data. The ROI variable has a minimum value by PT Provident Investasi Bersama Tbk with a value of -5.58 in 2020, a negative value indicates that there are observations or samples where the investment experiences losses, namely the return is less than the initial capital invested. The maximum value is owned by PT Cisadane Sawit Raya Tbk with a value of 14.81 in 2020, a positive value indicates that there are observations or samples where the investment generates profits, namely the return is greater than the initial capital invested. The average ROI value of 4.4362 indicates that overall, the investment analyzed generated an average profit of around 4.44%. The standard deviation of 4.91671 indicates that there is quite a large variation indicating high risk and uncertainty in the investment results. The higher the standard deviation, the greater the variation in ROI from the average. In other words, the individual ROI values in the sample tend to vary significantly from the average value.

The sample data of ROA observation or valid N in this study contains 55 data. The ROA variable has a minimum value by PT Provident Investasi Bersama Tbk with a value of -6.73 in 2020 which indicates that this company experienced losses due to poor asset utilization efficiency. The maximum value is owned by PT Triputra Agro Persada with a value of 25.40 in 2020 which means that this company has good performance in generating profits from its assets. With a mean of 6.2920, on average the company has an ROA of 6.29% which indicates an average profitability indicator. The standard deviation of 6.72563 indicates that the ROA values of the companies in the sample vary quite widely around the mean value. A large standard deviation indicates that there is a significant difference between the highest and lowest ROA values.

The sample data of ROE observation or valid N in this study contains 55 data. The ROE variable has a minimum value by PT Jhonlin Agro Raya Tbk with a value of -140.26 in 2020, which indicates that this company experienced a very large loss in comparison to their equity. The maximum value is owned by PT Nusantara Sawit Sejahtera with a value of 43.87 in 2021, which indicates that this company has good performance, which produces significant net profit in comparison to equity. The average ROE of 6.0767 indicates that in general, the companies in this sample have positive profitability. However, when the average value is closer to the minimum value than the maximum, this indicates that many companies in the sample may have suboptimal ROE performance.

#### Normality Test

This normality test uses the Kolmogorov-Smirnov (KS) test with the assumption that if the Asymp. Sig. (2-tailed) value is higher than 0.05, then the data population is shown to have a normal distribution. Conversely, if the Asymp. Sig. (2-tailed) value is lower than 0.05, then the data population is shown to have a normal distribution. If the relevance level is lower than 0.05, it means that the distribution of the data population is considered abnormal. This is because the research sample data shows an Asymp. Sig. result of 0.312, which is a higher value than the relevance level of 0.05, which means that the research sample data has been distributed normally and can be used for regression testing.

#### Multicollinearity Test

The use of tolerance value and VIF (Variance Inflation Factor) tests in this multicollinearity test through the VIF (Variance Inflation Factor) value rule is lower than 10 and the tolerance value is higher

than 0.100, meaning that the sample data is free from multicollinearity. Conversely, there is no multicollinearity in the sample data if the VIF factor is above 10 with a tolerance value of less than 0.100. Based on the results of the multicollinearity test, it is known that the tolerance value for the ROI variable is 0.106 above 0.100 and the VIF number is 9.444 below 10, the tolerance value for the ROA variable is 0.117 more than 0.100 and the VIF value is 8.564 less than 10, and the tolerance value for the ROE variable is 0.582 higher than 0.100 and the VIF number is 1.717 lower than 10. So it can be concluded that in the research sample data in each independent variable does not experience multicollinearity in the regression model.

## **Heteroscedasticity Test**

In this heteroscedasticity test, the glacier test is applied, the value of which is Sig. (significance) higher than 0.05, then it can be concluded that there are no signs of heteroscedasticity in the regression model. Conversely, if the Sig. (significance) number is lower than 0.05, then it can be concluded that there are signs of heteroscedasticity in the regression model. Based on the results of the heteroscedasticity test, it is known that the relevance value for the ROI variable is 0.735 greater than 0.05, the relevance value for the ROA variable is 0.913 higher than 0.05, and the relevance value for the ROE variable is 0.476 greater than 0.05. So it can be concluded that in the research sample data in each independent variable, there is no heteroscedasticity of the regression model.

#### **Autocorrelation Test**

In this autocorrelation test using the durbin watson test with the provision that the value of d (durbin watson) is smaller than dL or greater than (4-dL) then the null hypothesis is rejected, which means there is autocorrelation, if d lies between dU and (4-dU), then the null hypothesis is accepted, which means there is no autocorrelation, if d lies between dL and dU or between (4-dU) and (4-dL), then it does not produce a definite conclusion. Based on the research sample data, the d result is 2.083, which is greater than the upper limit (dU) which is 1.6815 and less than (4-dU) which is 2.385. So as the basis for decision making in the durbin Watson test, it can be concluded that there are no problems or symptoms of autocorrelation in the regression model.

## Multiple Linear Regression Test

Based on the results of the multiple linear regression analysis test findings, the equation model between variables can be formed as follows:

#### $WC = -29659.950 - 36370.578ROI + 32878.242ROA + 3635.262ROE + \mathcal{E}$

So it can be interpreted that the constant value is -29659.950shows the value of the working capital variable of-29659,950if ROI, ROA, and ROE are 0 (zero). The ROI regression coefficient is-36370,578which shows that for every 1% increase in the ROI variable, the working capital variable will decrease by -3.637% assuming that the ROA and ROE variables are constant.

#### **Determination Confidence Test**

Based on the results of the determination coefficient test, it is known that the Adjusted R Square value is 0.433. This shows that the Working Capital variable is influenced by the ROI, ROA, and ROE variables by 43.3% and the remaining 56.7% is influenced by other factors not examined in this study.

#### F Statistic Test (Simultaneous)

The F (Simultaneous) statistical test has measurement provisions, namely the Sig. value in the Anova study is less than 0.05 and the calculated F value is greater than the F table value, then the hypothesis is accepted, meaning that variable x simultaneously affects variable y. Conversely, if the Sig. value in the Anova study is greater than 0.05, and the calculated F value is less than the F table value, then it can be concluded that variable x does not simultaneously affect variable y. Based on the research sample data, the results of the sig. value in the Anova study are 0.000, less than 0.05 and the calculated F value is 14.733, greater than 2.77. So it can be interpreted that ROI, ROA, and ROE have a simultaneous effect on Working Capital.

## T Statistic Test (Partial)

There are measurement provisions for the t (partial) statistical test, namely the calculated t result is greater than the t table and the Sig. value is less than 0.05, then there is an influence of variable x on variable y or the hypothesis is accepted. Conversely, if the calculated t value is less than the t table and the Sig. value is greater than 0.05, then there is no influence of variable x on variable y or the hypothesis is rejected. Based on the SPSS output table "Coefficients" it is known that the Sig. value of the ROI variable is 0.007 less than 0.05 and the calculated t value is -2.815 greater than the t table -1.673 it can be concluded that partially there is a negative and significant influence between the ROI variable and Working Capital thus H1 is accepted. The ROA variable partially has a positive and significant effect on working capital with a calculated t result of 3.655 greater than the t table 1.673 and a Sig. value of 0.001 less than 0.05. The ROE variable partially has a significant effect on working capital with a calculated t table of 1.6673 and a Sig. value of 0.001 which is smaller than 0.05.

Hypothesis	Statement	Results	Positive/ Negative	Decision
H1	ROI has a positive effect to Working Capital	T Count > T table -2,815 < - 1,673	Negative	Hypothesis rejected
		Sig. Value < 0.05 0.007 < 0.05		
H2	ROA has a positive effect on Working Capital	T Count > T table 3,655 > 1,673 Sig. Value < 0.05 0.001 < 0.05	Positive	Hypothesis accepted
НЗ	ROE has a negative effect on Working Capital	T Count > T table 3,531 > 1,673 Sig. Value < 0.05 0.001 < 0.05	Positive	Hypothesis rejected
H4	ROI, ROA, and ROE positive effect on Working Capital	F count > F table 14,768 > 2.77 Sig. Value < 0.05 0.000 < 0.05	Positive	Hypothesis accepted

Figure 3. Hypothesis Testing of Research Model

## DISCUSSION

## Influence of ROI on Working Capital

Based on the test results, it can be concluded that ROI has a negative effect on Working Capital in Plantation companies on the Indonesia Stock Exchange in the period 2020 to 2022, so the H1 result is rejected. ROI is not statistically significant, which indicates that the effectiveness of fluctuating working capital turnover and increasing working capital needs do not have a significant effect on sales volume and profitability (Zakaria & Sonjaya, 2023). Working capital that is managed inefficiently can result in a decrease in ROI. When a company has a high level of working capital, this can indicate that the company is not utilizing its assets optimally, which in turn can reduce profitability. Research shows that low working capital turnover is associated with negative ROI, because funds that should be used for productive investment are trapped in inefficient working capital. The results of this test are in line with those studied by Chaidir & Kawuryan (2015), Ibrahim & Isiaka, (2021), and Sodha, (2019) which state that ROI has a negative impact on working capital.

The relationship between working capital and ROI is negative because inadequate or excessive working capital can cause inefficiency and reduce profits. This indicates that professional working capital management is important in increasing the profitability of the company.

## Effect of ROA on Working Capital

Based on the research results, it can be concluded that ROA has a positive effect on working capital in plantation companies on the Indonesia Stock Exchange in the period 2020 to 2022, so the H2 result is accepted. The results of this test are in line with those studied by Emmanuel et al (2023), (Ilham

et al., 2022), Siddiqui & Abdullah, (2019) which state that ROA has a positive impact on working capital. The use of working capital resources is a key financial aspect in logistics decision making and increasing this capital turnover can lead to increased ROI. Efficient use and turnover of capital, including working capital, is considered important for improving financial performance metrics such as ROA (Navrozova, 2022).

## Effect of ROE on Working Capital

Based on the test results, it can be concluded that ROE has a negative effect on working capital in plantation companies on the Indonesia Stock Exchange for the period 2020 to 2022, so the H3 results are rejected. The results of this test are in line with those studied by Aminus et al., (2023), Nadeem & Waris, (2020), Shaik, (2021), Purnomo et al., (2023) which state that ROE has a negative impact on working capital.

The relationship between ROE and working capital has a relevant positive influence on company performance. This means that when ROE increases, working capital has an effect (Hossain, 2020).

## The Influence of ROI, ROA, and ROE on Working Capital

Based on the test results, it can be concluded that ROI, ROA, and ROE have a positive effect on Working Capital in Plantation companies on the Indonesia Stock Exchange (IDX) in the period 2020 to 2022, so the H4 results are accepted. The test results are in accordance with the research of Aminus et al., (2023), Agurto et al., (2023) and Edouard (2021), which state that ROI, ROA, and ROE have a positive impact on working capital.

Working capital is related to positive profitability through the cash conversion cycle. In conclusion, it shows that there is a significant relationship between working capital, represented by ROI, ROA, and ROE. Therefore, effective working capital management, especially cash, can have a significant impact on the Company's financial performance (Yuliani et al., 2021)..

The implications of this research are multifaceted. Firstly, understanding the nuanced relationships between ROI, ROA, and ROE with working capital can aid management in formulating more informed financial strategies. Companies may need to refine their working capital management practices to optimize profitability and ensure efficient asset utilization. Additionally, the findings suggest that businesses should regularly evaluate their capital structure and turnover rates to align with best practices in financial performance. Policymakers and stakeholders in the plantation sector can also benefit from these insights to promote sustainable practices and enhance overall industry competitiveness. Overall, the research underscores the importance of effective working capital management as a critical factor for financial success in the dynamic landscape of the plantation industry.

## **5. CONCLUSION**

Based on the results of the research that has been carried out, it can be concluded that ROI, ROA, and ROE have a simultaneous effect on working capital in the Plantation sector listed on the Indonesia Stock Exchange for the period 2020 to 2022. ROI has a negative effect on working capital, meaning that companies with high liquidity have the potential not to face problems related to company profitability. ROA has a positive effect on working capital, meaning that the use of resources, especially the use of working capital, is a significant financial aspect in making logistics decisions. The focus in most logistics companies is to increase capital turnover, which in turn can have an impact on ROA. ROE has a positive effect on working capital, meaning that less effective use of working capital leads to increased productivity, higher sales, and increased profitability, which negatively impacts the Company's performance.

The research period is limited because it was only carried out for 3 years, namely the period 2020 to 2022, so that out of 32 companies that were the subject of observation, there were 5 companies that did not meet the assessment standards, so that there were 27 companies out of a total of 81 that were observed that fell into the criteria. 26 data experienced outliers when processing the data, so there were 55 data that fell into the criteria. Observations were made only through financial report data. Suggestions for research

## REFERENCES

- Abbas Ibrahim, U., & Isiaka, A. (2021). Working capital management and financial performance of non financial quoted companies in Nigeria. International Journal of Research in Business and Social Science (2147-4478), 10(3), 241–258. https://doi.org/10.20525/ijrbs.v10i3.1116
- Abuhommous, A., Alsaraireh, A. S., & Alqaralleh, H. (2022). The impact of working capital management on credit rating. Financial Innovation. https://doi.org/10.1186/s40854-022-00376z
- Agurto, Y. M. C., Rodriguez, V. H. P., Delgado, F. M. C., Cruz, L. del C. S. S., Ramírez, F. B., & Gavidia, M. J. F. (2023). *Relationship of Cash Management to Profitability of Cement Companies Listed on the Lima Stock Exchange. International Journal of Professional Business Review*, 8(4), 1–21. https://doi.org/10.26668/businessreview/2023.v8i4.1616
- Agustin, R., Nurcahyono, N., Sinarasri, A., & Sukesti, F. (2023). Financial Ratio and Stock Returns in Indonesia Equity Markets: A Signaling Theory Approach. Atlantis Press International BV. https://doi.org/10.2991/978-94-6463-154-8 25
- Al-Momani, T., Momani, M., Ibrahim, M., Almomani, T. M., Almomani, M. A., & Obeidat, M. I. (2021). The Relationship between Working Capital Management and Financial Performance: Evidence from Jordan. Journal of Asian Finance, 8(6), 713–720. https://doi.org/10.13106/jafeb.2021.vol8.no6.0713
- Aldubhani, M. A. Q., Wang, J., Gong, T., & Maudhah, R. A. (2022). Impact of working capital management on profitability: evidence from listed companies in Qatar. Journal of Money and Business, 2(1), 70–81. https://doi.org/10.1108/jmb-08-2021-0032
- Aminus, R., Renaldi, M. A., & Munawaruh, F. (2023). The Effect of Return on Assets and Return on Equity To Working Capital At Pt. Adaro Energy Tbk. Jurnal Manajemen, 11(3), 270–280. https://doi.org/10.36546/jm.v11i3.954
- Anggraini, R., & Yan Nyale, M. H. (2022). Pengaruh Profitabilitas, Solvabilitas dan Investment Opportunity Set terhadap Nilai Perusahaan dengan Kebijakan Dividen sebagai Variabel Moderasi. *Ekonomi, Keuangan, Investasi dan Syariah (EKUITAS)*, 4(1), 130–137. https://doi.org/10.20469/ijbas.7.10003-1
- Asiedu, M. A., Adegbedzi, D. K., Oduro, R., & Iddrisu, S. (2020). Working Capital Management Effect On Return On Equity- Evidence From Listed Manufacturing Firms On Ghana Stock Exchange ( GSE) Michael Amoh Asiedu, David Kwabla Adegbedzi, Richard Oduro and Sulemana Iddrisu. International Journal of Finance and Accounting, 5(1), 47–66.
- Baharsyah, R., & Nasihin, I. (2019). Accounthink : Journal Of Accounting And Finance Analysis Of Sales Growth And Profitability On Working. 4(02), 789–802.
- Chaidir, & Kawuryan, S. L. (2015). Pengaruh Manajemen Modal Kerja terhadap Rentabilitas Perusahaan Pada PT Sepatu Bata, Tbk. *JIMFE (Jurnal Ilmiah Manajemen Fakultas Ekonomi)*, *1*(1), 42–48. https://doi.org/10.34203/jimfe.v1i1.454
- Chintha, S. S., & Prasad, K. V. (2021). A Study on the Impact of Cash Management on the Financial Performance of the Listed Manufacturing Companies from Muscat Securities Market, Sultanate of Oman. International Journal of Business and Administrative Studies, 7(1), 25–35. https://doi.org/10.20469/ijbas.7.10003-1
- Choiriyah, C., Fatimah, F., Agustina, S., & Ulfa, U. (2021). The Effect Of Return On Assets, Return On Equity, Net Profit Margin, Earning Per Share, And Operating Profit Margin On Stock Prices Of Banking Companies In Indonesia Stock Exchange. International Journal of Finance Research, 1(2), 103–123. https://doi.org/10.47747/ijfr.v1i2.280
- Dalci, I., Tanova, C., Ozyapici, H., & Bein, M. A. (2019). The moderating impact of firm size on the relationship between working capital management and profitability. Prague Economic Papers, 28(3), 296–312. https://doi.org/10.18267/j.pep.681

- Dede Suharna, & Augustina Kurniasih. (2022). Impact of Liquidity and Activities on Profitability by Mediation of Capital Structure. Asean International Journal of Business, 1(2), 37–50. https://doi.org/10.54099/aijb.v1i2.181
- Edouard, S. (2021). Financial Management Practices on Financial Performance at Selected Private Insurance Companies , Kigali , Rwanda. 09(10), 2492–2506. https://doi.org/10.18535/ijsrm/v9i10.em09
- Emmanuel, M. T., Phocenah, N., & Kerry, M. (2023). The Impact of Working Capital and Macroeconomic Variables on the Profitability of Listed Industrial Firms in South Africa. International Journal of Economics and Financial Issues, 13(5), 32–42. https://doi.org/10.32479/ijefi.14497
- Ginting, M. C. (2018). Peranan Modal Kerja dalam Meningkatkan Profitabilitas. *Jurnal Manajemen*, 4(2), 187–196. https://ejournal.lmiimedan.net/index.php/jm/article/view/41
- Hasanah, A. S. (2022). The Effect of Inventory Turnover on Return on Investment (ROI) in Pg. Rajawali II Cirebon. Return : Study of Management, Economic and Bussines, 1(1), 7–11. https://doi.org/10.57096/return.v1i01.6
- Hossain, T. (2020). The Effect of Working Capital Management on Profitability: A Study on Manufacturing Companies in Banglasdesh. International Journal of Research in Business and Social Science (2147-4478), 9(6), 114–122.
- Ilham, R. N., Irawati, H., Nurhasanah, N., Inuzula, L., Sinta, I., & Saputra, J. (2022). Relationship of Working Capital Management and Leverage on Firm Value: An Evidence from the Indonesia Stock Exchange. Journal of Madani Society, 1(2), 64–71. https://doi.org/10.56225/jmsc.v1i2.129
- Indraswari, T., & Maulana, M. (2023). Pengaruh Debt to Equity Ratio dan Current Ratio Terhadap Return on Equity Pada Perusahaan PT. Sat Nusapersada Tbk Periode 2012-2021. Jurnal Ilmiah Swara Manajemen, 3(1), 184–196.
- Julianti, S., & Masditok, T. (2023). The Influence of Working Capital Turnover and Debt to Equity Ratio on Return on Asset. Almana : Jurnal Manajemen dan Bisnis, 7(3), 581–592. https://doi.org/10.36555/almana.v7i3.2389
- Kasim, S., Saragih, M. S., & Saifannur, A. (2021). Effect of Working Capital Management and Leverage on Company Value with Profitability as Moderating Variables (Empirical Study on Manufacturing Companies Listed on the Indonesia Stock Exchange). International Journal of Economic, Business, Accounting, Agriculture Management and Sharia Administration, 1(1), 41– 53.
- Mahardini, N. Y. (2019). The Impact of Working Capital, Return on Assets and Return on Equity on Corporate Income Tax. Journal of Accounting Auditing and Business, 2(2), 37–45. https://doi.org/10.24198/jaab.v2i2.22668
- Mardones, J. G. (2022). Working Capital Management and Business Performance: Evidence From Latin American Companies. Economic Research-Ekonomska Istraživanja, 31(1), 3189–3320. https://doi.org/10.1080/1331677X.2021.1986675
- Mauliddah, N., & Fajriah, A. I. (2021). Return On Equity (ROE) dalam Memediasi antara Kepemilikan Manajerial dengan Modal Kerja (Working Capital). ISOQUANT : Jurnal Ekonomi, Manajemen dan Akuntansi, 5(2), 188–204. https://doi.org/10.24269/iso.v5i2.790
- McGowan, B., Reid, C. R., Bao, S., & Kapellusch, J. (2019). Return on Investment of Ergonomics Interventions – Discussion Panel. Proceedings of the Human Factors and Ergonomics Society Annual Meeting, 1(1), 978–979. https://doi.org/10.1177/1071181319631475
- Meah, M. R., Sen, K. K., & Sahabuddin, M. (2021). Do Working Capital Decision and Efficiency of Working Capital Management Contribute to the Profitability? Evidence from Bangladesh. Asia-

*Pacific Journal of Management Research and Innovation*, *17*(1–2), 7–16. https://doi.org/10.1177/2319510x211047368

- Morshed, A. (2020). Role of working capital management in profitability considering the connection between accounting and finance. Asian Journal of Accounting Research, 5(2), 257–267. https://doi.org/10.1108/AJAR-04-2020-0023
- Nadeem, M., & Waris, M. (2020). Impact of Working Capital Policies on Firm's Performance, Evidence from Pakistan. Journal of International Business and Management, 3(1), 1–20. https://doi.org/10.37227/jibm-2020-01-26
- Nastiti, P. K. Y., Atahau, A. D. R., & Supramono, S. (2019). Working Capital Management And Its Influence On Profitability And Sustainable Growth. Business: Theory and Practice, 20(61–68). https://doi.org/10.3846/btp.2019.06
- Navrozova, Y. (2022). Impact of Logistics on the Financial Results of the Company. Development of Management and Entrepreneurship Methods on Transport (ONMU), 78(1), 42–54. https://doi.org/10.31375/2226-1915-2022-1-42-54
- Oweis, K. A. (2020). The impact of working capital management on the firm's profitability. International Journal of Advanced and Applied Sciences, 7(11), 67–73. https://doi.org/10.21833/ijaas.2020.11.007
- Patricia Saragih, C., Suri, A., Ayu, S., & Setiyawati, H. (2023). *The Effect of Current Ratio, Return on* Assets, and Debt Equity Ratio on Financial Distress. International Journal of Management Studies and Social Science Research, 05(05), 267–275. https://doi.org/10.56293/ijmsssr.2022.4723
- Purnomo, D., Sitepu, G. L., Nugraha, Y. R., Bayu, M., & Rosiyan, P. (2023). Social Metabolism in Buruan SAE : Individual Rift Perspective on Urban Farming Model for Food Independence in Bandung, Indonesia.
- Puspitaningtyas, Z. (2019). Empirical evidence of market reactions based on signaling theory in Indonesia Stock Exchange. Investment Management and Financial Innovations, 16(2), 66–77. https://doi.org/10.21511/imfi.16(2).2019.06
- Rokayah, S., & I, A. A. R. (2024). The Influence of Working Capital Turnover and Net Profit Margin (NPM) on Return on Asset (ROA) at PT Indofood Sukses Makmur Tbk (Case Study Listed on the Indonesia Stock Exchange for the 2015-2022 Period) Pengaruh Perputaran Modal Kerja dan Net Prof. 3(2), 211–232.
- Septyanto, D., & Welandasari, N. F. (2020). Effects of Current Ration, Debt to Asset Ratio, and Return to Success on Financial Distress in Indonesia Stock Exchange. Prosiding ICSMR, 1(1), 231–247. https://conference.loupiasconference.org/index.php/ICSMR/article/view/106
- Shahfira, D., & Hasanuh, N. (2021). The Influence of Company Siza and Debt to Asset Ratio (DAR) on Return on Assets (ROA). MONETER Jurnal Akuntansi dan Keuangan, 8(1), 9–13. https://doi.org/10.31294/moneter.v8i1.8807
- Shaik, A. R. (2021). Components of working capital and profitability in Saudi Arabian companies. Investment Management and Financial Innovations, 18(3), 52–62. https://doi.org/10.21511/imfi.18(3).2021.05
- Siddiqui, D. A., & Abdullah, S. (2019). Working Capital Financing and Corporate Profitability of Pakistan Manufacturing Firms: Evidence From Fmcg, Cement & Chemical Sector. Asian Journal of Economic Modelling, 7(2), 82–94. https://doi.org/10.18488/journal.8.2019.72.82.94
- Sini, A. R., & Nainggolan, Y. A. (2023). Do Firms Change the Working Capital Management Policy During The Covid-19 Pandemic? Case of Transportation & Logistics and Healthcare Industries in Indonesia. International Journal of Current Science Research and Review, 06(07), 4569– 4578. https://doi.org/10.47191/ijcsrr/v6-i7-71

- Sipayung, R. W., Dewina, A., Sinuraya, P., Siahaan, A. B., & Sitorus, J. S. (2019). Accounting ) The Effect Of Return On Assets, Return On Investment, Return On Equity, And Price Earning Ratio On Working Capital In Basic & Chemical Industry Companies Listed On The Indonesian Stock Exchange For The 2017-2019 Period. Jimea | Scientific. 5(2), 888–904.
- Siswanto, D. J., Maudhiky, F. ., Wahyudi, I., & Syah, T. Y. R. (2022). The Influence of Debt to Equity Ratio (DER), Return on Assets (ROA) and Company Size on Profit Growth. Journal of Social Science, 3(6), 2137–2147. https://doi.org/10.46799/jss.v3i6.486
- Sodha, D. S. (2019). Analysis Of Working Capital Management Of Dr. Shankar Sodha Associate professor S. D. School of Commerce Gujarat University An International Multidisciplinary Research e-Journal. 5, 1–9.
- Spence, M. (1973). Job Market Signaling. The Quarterly Journal of Economics, 87(3), 355-374.
- Sugiarti, L., Pratiwi, A., & Tinggi Ilmu Ekonomi Bima, S. (2022). Effect of Effectiveness of Working Capital on Return on Investment (Roi) Manufacturing Companies Listed on Idx. Kewirausahaan dan Bisnis, 85(1), 85–95.
- Supit, M. O., & Budiyanto, B. (2019). Pengaruh ROA, ROE, dan NPM terhadap Modal Kerja Perusahaan Makanan dan Minuman. Jurnal Ilmu dan Riset Manajemen, 8(9), 1–15. https://jurnalmahasiswa.stiesia.ac.id/index.php/jirm/article/view/2526/2529
- Tsaqif, B. M., & Agustiningsih, W. (2021). Pengaruh Financial Distress dan Ukuran Perusahaan Terhadap Manajemen Laba dengan Kepemilikan Manajerial sebagai Variabel Moderasi. Jurnal Akuntansi Dan Governance, 2(1), 53. https://doi.org/10.24853/jago.2.1.53-65
- Vu Thi, A. H., & Phung, T. D. (2021). Capital Structure, Working Capital, and Governance Quality Affect the Financial Performance of Small and Medium Enterprises in Taiwan. Journal of Risk and Financial Management, 14(8). https://doi.org/10.3390/jrfm14080381
- Waweru, F. G., & Atheru, G. (2022). Working Capital Management and Financial Performance of Selected Supermarkets in Nairobi County, Kenya. Asian Journal of Economics, Finance and Management, 4(1), 114–122. https://journaleconomics.org/index.php/AJEFM/article/view/162
- Yuliani, Karim, S., Umrie, R. H., Bakar, S. W., & Robiyanto, R. (2021). Moderating effect of business environment to working capital and profitability in Indonesia. Contaduria y Administracion, 66(2), 1–21. https://doi.org/10.22201/fca.24488410e.2021.2480
- Yusuf, R., Nurwantira, A., Hernawati, E., & Dudi, E. (2021). Pengaruh Profitabilitas terhadap Modal Kerja pada PT. Indofood Sukses Makmur Tbk Periode 2014-2018. Jurnal E-Bis (Ekonomi-Bisnis), 5(1), 190–201. https://doi.org/10.37339/e-bis.v5i1.461
- Zakaria, Z., & Sonjaya, Y. (2023). Interplay of Working Capital Turnover, Asset Turnover and Capital Structure on Return on Investment. Atestasi : Jurnal Ilmiah Akuntansi, 6(2), 403–414. https://doi.org/10.57178/atestasi.v6i2.693