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The Influence of Current Ratio, Debt to Equity Ratio, and Operating Expenses on Return on Equity Study on Raw Material Producing Companies in the Plantation Sub-Sector Listed on the IDX Period 2018 – 2023

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Abstract *– Profitability reflects a company's performance in generating profits and serves as an indicator of its financial condition. This study aims to determine the effect of Current Ratio (CR), Debt to Equity Ratio (DER), and Operational Expenses on Return on Equity (ROE) in plantation subsector companies listed on the Indonesia Stock Exchange (IDX) for the 2018-2023 period. The study uses a quantitative method with a population of 6 plantation companies listed on the IDX, selected using a purposive saturated sampling method, and financial statement data processed using SPSS version 25. The t-test results show that, partially, the Current Ratio positively and significantly affects ROE (t_{count} 2.497 > t_{table} 1.976; p = 0.03 < 0.05). The Debt-to-Equity Ratio negatively and significantly affects ROE (tcount -2.009 > -1.976; p = 0.001 < 0.05). Operational Expenses negatively but not significantly affect ROE (t_{count} -1.888 < -1.976; p = 0.061 > 0.05). The F-test results indicate that, simultaneously, CR, DER, and Operational Expenses significantly affect ROE (F_{count} 2.993 > F_{table} 2.44; p = 0.021 < 0.05). In conclusion, there is a partial and simultaneous effect of CR, DER, and Operational Expenses on ROE in plantation companies listed on the IDX during the 2018-2023 period.*

Keywords *– Current Ratio (CR), Debt to Equity Ratio (DER), Operating Expenses, Return on Equity (ROE).*

INTRODUCTION

The agricultural sector plays an important role in Indonesia's economy by meeting food needs. Plantations, as a significant sub-sector, have a high trade volume because their main products are widely exported. Companies in this sector seek to improve performance to achieve profitability and financial performance for the welfare of stakeholders (Fahmi, 2018; Qassmir, 2018)

Financial statements are the main tool used to assess a company's financial condition in a given period and to measure business development and the achievement of company goals (Fahmi, 2018; Harahap, 2018). Financial statements consist of balance sheets, income statements, cash flow statements, and equity change statements, which provide relevant information regarding the company's financial position and business results (Bridwan, 2017; Manaveer., 2019). According to Sudana, (2015) Financial reports also function as a communication tool between management and stakeholders, while Sugiri (2019) revealed that these reports provide important information for economic decision-making.

Profitability is often used to assess a company's performance, with ratios such as Return On Equity (ROE) which measures net profit to own capital, indicating the effectiveness of capital management (Kasmir, 2018). A high ROE reflects a high return relative to equity. The Current Ratio (CR) measures the ability to meet short-term obligations, while the Debt to Equity Ratio (DER) shows the ratio of debt to equity,

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with a high ratio indicating dependence on debt that can increase risk (Kasmir, 2018). High operating expenses can reduce net profit and ROE, but it is necessary to evaluate whether these costs are proportional to the increase in revenue (Cashmere, 2018).

Data on ROE in plantation sub-sector companies listed on the IDX for the 2018-2023 period shows a significant downward trend in financial performance. For example, Astra Agro Lestari Tbk (AALI) experienced a decrease in ROE from 8.68% in 2018 to 3.28% in 2019, and other companies such as Dharma Satya Nusantara Tbk (DSNG), PP London Sumatra Indonesia Tbk (LSIP), and Sampoerna Agro Tbk (SGRO) also showed similar declines. This decline reflects the significant challenges faced by companies in this sub-sector, which may be affected by a variety of economic and operational factors.

Current Ratio data shows significant variation among plantation companies, with Astra Agro Lestari Tbk (AALI) and Dharma Satya Nusantara Tbk (DSNG) declining in 2022, while PP London Sumatra Indonesia Tbk (LSIP) and Sampoerna Agro Tbk (SGRO) recorded increases, reflecting different liquidity dynamics. Fluctuations in operating expenses were also seen, with AALI and DSNG recording significant increases, as well as LSIP and SGRO, which showed an increase in operating costs.

The importance of financial ratios in assessing company performance, especially the Current Ratio and Debt to debt-to-equity ratio to Return On Equity, is the main focus of this study. Previous research has shown that financial ratios such as CR and DER affect a company's profitability and financial performance. Halin, (2018) found that CR and DER did not affect ROE in the telecommunications industry, while Sholehah Kwamant (2019) showed different results in the plastics and packaging sub-sector. Research (Fadhil & Hendratno, 2019; Kusminaini, 2017) provides additional insights into the influence of these ratios on the automotive and food and beverage industries. This study aims to fill in the gaps in the literature by examining the effects of CR and DER on ROE in the plantation sub-sector in Indonesia during the period 2018-2023, as well as considering additional variables such as Operating Expenses.

MATERIALS AND METHODS

This study uses a causal associative method with a quantitative approach to determine the relationship or influence between independent and dependent variables. The quantitative approach involves recording and analyzing data statistically (Shinta, 2013). The research population consists of 18 companies producing raw materials in the plantation sub-sector listed on the Indonesia Stock Exchange (IDX) during the 2018-2023 period (Suharyadi & Purwanto S.K, 2016).

The sample was taken using a purposive sampling technique based on certain criteria, namely companies listed on the IDX, providing quarterly consolidated financial statements, and in rupiah currency (Sugiyono, 2019). Of the total population, 6 companies met the criteria, resulting in 144 observations. Secondary data is obtained from the company's financial statements and www.idx.co.id websites (Shinta, 2013).

The data analysis technique used SPSS 24.0, including descriptive statistical analysis, classical assumption tests (normality, multicollinearity, heteroskedasticity, autocorrelation), multiple regression, multiple correlation coefficient, and determination coefficient (R^2). Hypothesis testing was carried out with the t-test and the F-test to assess the influence of independent variables on Return On Equity (ROE).

RESULTS AND DISCUSSION

Return On Equity (ROE)

Table 1 Return On Equity (ROE) Data on Manufacturing Companies in the Plantation Sub-sector Listed on the IDX for the 2018-2023 Period

YEAR	QUARTERLY	In %					
		AALI	DSNG	LSIP	SGRO	SMS	TBLA
2018	I	8,43	16,01	6,07	3,71	2,4	1,1
	II	9,47	13,58	6,48	5,24	3,1	1,45
	III	9,25	12,7	5,65	5,88	2,5	1,78
	IV	7,58	11,77	3,98	1,42	3,8	2,88
	Average	8,68	13,52	5,55	4,06	2,95	1,80
2019	I	5,9	12	3,04	1,12	10,02	2,98
	II	3,77	10,11	1,42	1,34	1,78	13,9
	III	2,29	5,85	0,48	2,46	2,89	10,5
	IV	1,14	4,93	2,99	0,76	3,46	9,7
	Average	3,28	8,22	1,98	1,42	4,54	9,27
2020	I	2,88	5,25	3,45	1,34	4,5	8,5
	II	2,96	7,77	3,91	0,86	1,3	9,9
	III	3,61	7,47	5,52	5,56	1,56	6,78
	IV	4,44	7,79	7,5	0,76	2,77	4,5
	Average	3,47	7,07	5,10	2,13	2,53	7,42
2021	I	3,26	7,96	9,52	0,19	3,01	3,4
	II	5,61	8,1	11,29	4,6	3,5	3,2
	III	8,58	11,37	11,82	7,01	2,3	2,1
	IV	9,56	10,54	9,75	18,01	1,1	1,89
	Average	6,75	9,49	10,60	7,45	2,48	2,65
2022	I	10,85	11,71	9,53	17,89	1,6	1,9
	II	10,23	13,74	9,69	20,12	1,9	1,67

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YEAR	QUARTERLY	In %					
		AALI	DSNG	LSIP	SGRO	SMS	TBLA
	III	8,14	15,89	9,47	21,95	1,9	2,9
	IV	7,96	15,02	9,48	20,58	1,67	4,5
	Average	9,30	14,09	9,54	20,14	1,77	2,74
2023	I	6,69	14,74	7,64	16,96	2,9	3,89
	II	5,99	13,69	6,09	14,6	2,8	2,78
	III	6,03	9,93	6,62	12,9	2,6	13,09
	IV	4,8	9,64	6,71	9,25	2,4	8,6
	Average	5,88	12,00	6,77	13,43	2,68	7,09

Based on table 1 above, the average Return On Equity (ROE) value of five manufacturing companies in the plantation sub-sector listed on the Indonesia Stock Exchange (IDX) for the 2018-2023 period, shows that the average value of the Return On Equity (ROE) value fluctuates every year. The highest average Return On Equity (ROE) value occurred in 2022 by PT. Sampoerna Agro Tbk (SGRO) by 20.14%, while the average value of the lowest Return on Equity (ROE) value in 2018 by PT. Sampoerna Agro Tbk by 1.42%.

The distribution of the Return On Equity (ROE) variable data can then be seen in the form of a histogram as follows:

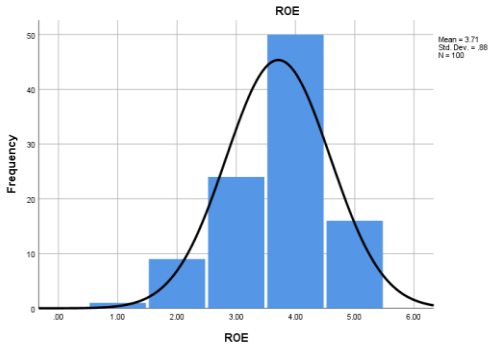

Fig. 1. Return On Equity (ROE) histogram chart

Current Ratio (CR)

Table 2 Current Ratio (CR) Data on Manufacturing Companies in the Plantation Sub-sector Listed on the IDX for the 2018-2023 Period

YEAR	QUARTERLY	In %					
		AALI	DSNG	LSIP	SGRO	SMS	TBLA
2018	I	2,05	0,87	4,08	1,02	5,47	2,25
	II	1,55	1,13	2,88	1,01	5,41	1,76
	III	1,6	1,14	4,18	1,02	5,14	1,93
	IV	1,45	1,03	4,66	0,92	5,28	1,88
	Average	1,66	1,04	3,95	0,99	5,33	1,96
2019	I	1,58	0,97	3,19	0,82	6,05	1,83
	II	1,29	0,86	2,99	0,74	2,26	1,9
	III	2,26	0,75	3,3	0,57	2,43	1,76
	IV	2,85	0,82	4,7	0,58	2,51	1,63
	Average	2,00	0,85	3,55	0,68	3,31	1,78
2020	I	2,39	0,84	3,79	0,61	3,07	1,51
	II	3,73	0,86	4,21	0,59	2,78	1,36
	III	3,49	0,92	4,13	0,6	2,78	1,44
	IV	3,31	1,14	4,89	0,73	2,37	1,49
	Average	3,23	0,94	4,26	0,63	2,75	1,45
2021	I	3,26	1,13	4,17	0,92	2,58	1,43
	II	3,8	1,12	4,57	1,03	2,39	1,41
	III	3,69	1,13	4,95	1	2,58	1,43
	IV	1,58	1,25	6,18	1,09	2,39	1,5
	Average	3,08	1,16	4,97	1,01	2,49	1,44
2022	I	1,65	1,16	6,65	1,12	0,76	1,25
	II	1,67	1,06	6,31	1,13	0,61	1,37
	III	1,64	1,04	6,17	1,29	1,5	1,28
	IV	3,6	1,07	7,2	1,32	1,03	1,2
	Average	2,14	1,08	6,58	1,22	0,98	1,28
2023	I	3,74	1,01	7,69	1,07	1,12	1,39
	II	2,86	1	5,17	0,89	1,01	1,46
	III	1,69	1,07	8,26	1	1,01	1,41
	IV	1,85	1	9,53	1,23	0,96	1,4
	Average	2,54	1,02	7,66	1,05	1,03	1,42

Source: www.idx.co.id (data reprocessed by researchers).

Based on Table 2 above, the average Current Ratio (CR) value of five manufacturing companies in the plantation sub-sector on the Indonesia Stock Exchange (IDX) for the 2018-2023 period shows annual fluctuations. The highest CR score was recorded in 2023 by PT. PP London Sumatra Indonesia Tbk (LSIP) of 7.66%, while the lowest CR value in 2020 by PT. Sampoerna Agro Tbk (SGRO) by 0.63%.

The distribution of Current Ratio (CR) variable data can then be seen in the form of a histogram as follows:

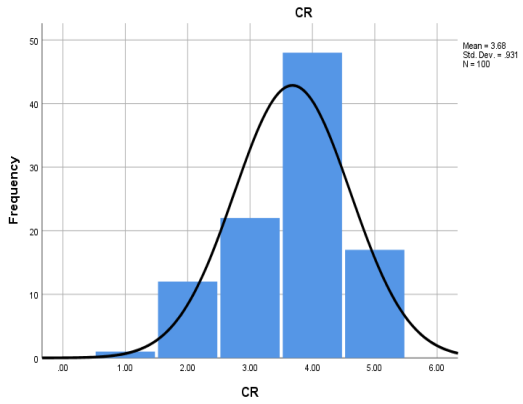

Fig. 2 Graphics Histogram Current Ratio (CR)

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Debt to Equity Ratio (DER)

Table 3 Data on Debt to Equity Ratio (DER) in Manufacturing Companies in the Plantation Sub-sector Listed on the IDX for the 2018-2023 Period

YEAR	QUARTERLY	In %					
		AALI	DSNG	LSIP	SGRO	SMS	TBLA
2018	I	0,2	1,25	2,4	3,3	1,45	2,4
	II	0,26	1,33	2,6	3,6	1,67	2,5
	III	0,25	1,21	2,8	2,9	1,88	2,3
	IV	0,25	1,83	2,9	3,6	1,9	2,33
	Average	0,24	1,41	2,68	3,35	1,73	2,38
2019	I	0,25	1,79	2,1	2,8	1,78	2,1
	II	0,3	1,8	2,3	2,45	1,56	2,2
	III	0,32	1,79	2,5	2,32	1,9	2,9
	IV	0,31	1,76	2,78	2,11	1,34	2,8
	Average	0,30	1,79	2,42	2,42	1,65	2,50
2020	I	0,38	1,76	5,45	2,46	1,45	2,6
	II	0,3	1,65	5,46	2	2,9	2,7
	III	0,31	1,67	3	2,8	2,8	2,33
	IV	0,3	0,97	3,46	2,9	2,33	2,76
	Average	0,32	1,51	4,34	2,54	2,37	2,60
2021	I	0,3	0,94	3,12	2,46	2,89	2,78
	II	0,3	0,96	2,34	3,8	2,67	3,91
	III	0,28	0,9	2,18	4,3	3,46	3,1
	IV	0,28	0,71	2,9	3,5	3,11	3,2
	Average	0,29	0,88	2,64	3,52	3,03	3,25
2022	I	0,27	0,67	3,04	3,3	2,9	2,22
	II	0,28	0,73	3,25	2,1	2,43	2,7
	III	0,34	0,65	3,78	2,14	2,91	2,36
	IV	0,19	0,62	4,78	2,46	2,67	2,89
	Average	0,27	0,67	3,71	2,50	2,73	2,54
2023	I	0,18	0,6	4,79	3,9	1,99	2,09
	II	0,18	0,65	1,28	2,77	2,89	2,06
	III	0,19	0,67	2,9	3,9	3,17	2,04
	IV	0,18	0,59	1,44	2,4	1,9	2,1
	Average	0,18	0,63	2,60	3,24	2,49	2,07

Source: www.idx.co.id (data reprocessed by researchers).

Based on Table 3 above, the average value of the Debt to Equity Ratio (DER) in five manufacturing companies in the plantation sub-sector listed on the Indonesia Stock Exchange (IDX) for the 2018-2023 period, shows that the average value of the Debt to Equity Ratio (DER) fluctuates every year. The highest average Debt to debt-equity ratio (DER) in 2020 by PT. PP London Sumatra Indonesia Tbk (LSIP) is 4.34% while the lowest average Debt to the debt-to-equity ratio (DER) in 2023 by PT Astra Agro Lestari Tbk is 0.18%.

The distribution of the Debt to debt-to-equity ratio (DER) variable data can then be seen in the form of a histogram as follows:

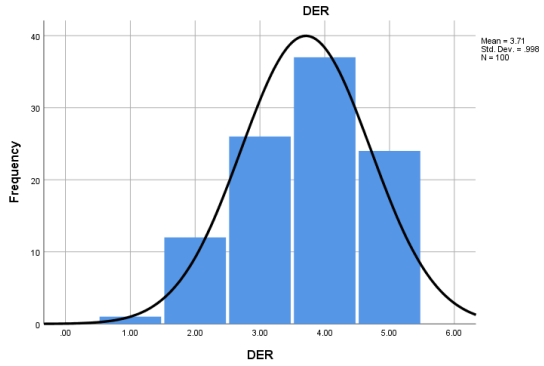

Fig. 3. Graphics Histogram Data Debt to Equity Ratio (DER)

Operational expenses

Table 4 Operational Expense Data on Manufacturing Companies in the Plantation Sub-sector Listed on the IDX for the 2018-2023 Period

YEAR	QUARTERLY	In %					
		AALI	DSNG	LSIP	SGRO	SMS	TBLA
2018	I	6,3	8,1	9,2	5,47	11,8	4,5
	II	6,2	10,8	6,9	5,43	12,1	4
	III	6,5	8,6	5,3	5,2	13,2	4,8
	IV	6,4	21,3	12,5	5,3	11,1	4,8
	Average	6,35	12,20	8,48	5,35	12,05	4,53
2019	I	7,1	11,3	11,3	4,3	19	4,4
	II	6,7	14,2	12,5	3,3	12,1	4,9
	III	7,2	13	7,1	3,9	9,01	5,1
	IV	6,3	11,1	0,2	4,8	9,5	5,17
	Average	6,83	12,40	7,78	4,08	12,40	4,89
2020	I	6	7,4	8,1	4,8	9,3	5,5
	II	6,1	16,7	17,6	2,2	8,36	5
	III	6,4	6,2	1,4	2,9	10,19	3,4
	IV	5,5	13	5,6	2,2	10,17	3,44
	Average	6,00	10,83	8,18	3,03	9,51	4,34
2021	I	5,4	5,1	4,9	2,4	10,11	4,9
	II	5	10	8,8	2,46	8,46	6,7
	III	5,2	9	6,3	3,1	7,58	7,8
	IV	7,3	10,9	33,6	3,7	7,77	7,9
	Average	5,73	8,75	13,40	2,92	8,48	6,83
2022	I	4,8	5,3	10,2	3,3	7,1	7,01
	II	7,5	10,4	8,6	3,2	7,3	7,3
	III	7,1	9,8	0,7	3,29	6,4	4,44
	IV	8,1	11,9	5,8	3,1	6,4	4,8
	Average	6,88	9,35	6,33	3,22	6,80	5,89
2023	I	7,3	9,4	13,3	3,11	7,9	2
	II	7,5	10	9,3	2,9	9	2,9
	III	6,2	10,7	1,6	2,67	5,5	2,1
	IV	8,6	10,6	15,5	2,6	5,7	2,3

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YEAR	QUARTERLY	In %					
		AALI	DSNG	LSIP	SGRO	SMS	TBLA
	Average	7,40	10,18	9,93	2,82	7,03	2,33

Source : www.idx.co.id (data reprocessed by researchers)

Based on table 4 above, the average value of Operating Expenses in five manufacturing companies in the plantation sub-sector listed on the Indonesia Stock Exchange (IDX) for the 2018-2023 period, shows that the average value of Operating Expenses fluctuates every year. The highest average value of Operating Expenses in 2021 by PT. PP London Sumatra Indonesia Tbk (INCI) is 13.40% while the lowest average Operating Expense value in 2023 by PT Tunas Baru Lampung Tbk is 2.33%.

The distribution of the Operational Expense variable data can then be seen in the form of a histogram as follows:

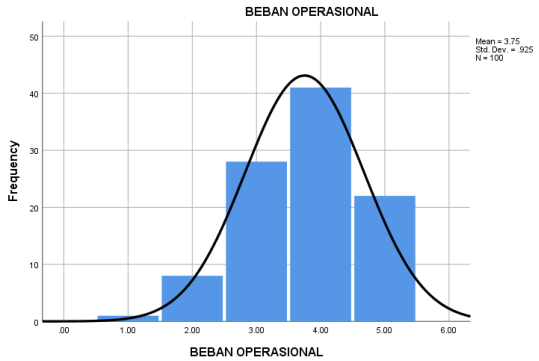

Fig. 4. Histogram of Operational Expense Data

Testing Requirements Analysis

Descriptive Statistical Test

Table 5 Descriptive Statistical Test Results

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
CR	144	1	953	206.13	180.841
THE	144	2	546	123.08	125.636
OPERATIONAL EXPENSES	144	2	1019	137.94	214.794
ROE	144	11	2195	529.58	515.184
Valid N (listwise)	144				

Source: IBM SPSS version 25 Ouput data (processed data, 2024)

Based on a descriptive statistical test on 144 data, the results show that Return On Equity (ROE) has a minimum value of 11, a maximum of 2195, an average of 529.85, and a standard deviation of 515.184. The Current Ratio (CR) shows a minimum value of 1, a maximum of 953, an average of 206.13, and a standard deviation of 180.841. The Debt to debt-to-equity ratio (DER) has a minimum value of 2, a maximum of 546, an average of 123.08, and a standard deviation of 125.636. Operating expenses show a minimum value of 2, a maximum of 1019, an average of 137.94, and a standard deviation of 214.794.

Classical Assumption Test

Classical assumption testing is carried out through four stages, namely normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test.

Normality Test

The statistical test used to test residual normality is the Kolmogorov-Smirnov (K-S) one-sample statistical test. The following are the results of the Kolmogorov-Smirnov Test:

Table 6 Kolmogorov-Smirnov Test Results

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		144
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	506.08819971
Most Extreme Differences	Absolute	.132
	Positive	.132
	Negative	-.121
Test Statistic		.132
Asymp. Sig. (2-tailed)		.200c
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		

Source: IBM SPSS version 25 Output Data (processed data, 2024)

Based on table 6 above, shows the value of Asymp.Sig. (2-tailed) is 0.200 and the value is greater than the significance value of 0.05 or 5%, then it can be concluded that the value is normally distributed.

Multicollinearity Test

The multicollinearity test aims to test whether the regression model finds a correlation between independent variables.

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Table 7 Multicollinearity Test Results

Coefficientsa						
Model		Correlations			Collinearity Statistics	
		Zero-order	Partial	Part	Tolerance	BRIGHT
1	CR	.016	.042	.041	.963	1.038
	THE	-.096	-.085	-.084	.954	1.048
	OPERATIONAL EXPENSES	-.165	-.158	-.157	.985	1.016
a. Dependent Variable: ROE						

Source: IBM SPSS version 26 Output Data (processed data, 2024)

Based on table 7 above, shows that the tolerance Current Ratio (CR) value is 0.963, Operating expenses are 0.985, and Debt to Equity Ratio (DER) is 0.954 The value is greater than 0.01 and the VIF Current Ratio (CR) value is 1.038, Operating expenses are 1.016 and Debt to Equity Ratio (DER) 1.048 because the VIF value is less than 10, it can be concluded that there is no multicollinearity between independent variables in this regression model.

Heteroscedasticity Test

A good regression model is homoscedasticity or no heteroscedasticity occurs. To find out whether there is heteroscedasticity, you can see the scatterplot graph, which is as follows:

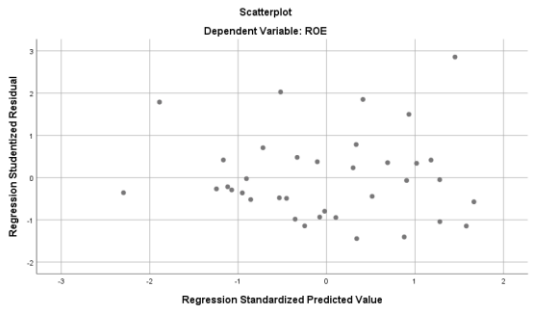

Figure 6 Heteroscedasticity Test Results

Source: IBM SPSS Output Data version 25 (processed data, 2024)

Based on figure 6, it can be seen that the dots are spread randomly, do not form a certain clear pattern and are spread above or below the zero number (0) on the Y axis, so it can be concluded that there is no heteroscedasticity.

Autocorrelation Test

A good regression equation can have autocorrelation problems, if autocorrelation occurs then the equation becomes not good for prediction. One of the measures in determining the existence of an autocorrelation problem is the Durbin-Watson (DW) test. With the following conditions:

1. Positive autocorrelation occurs if DW is below -2 (DW < -2)
2. No autocorrelation occurs, if DW is between -2 and +2 (-2 DW +2)
3. Negative autocorrelation occurs if DW is above +2 (DW > +2)

The results of the autocorrelation test in this study can be seen in Table 4.8 below:

Table 8 Autocorrelation Test Results

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.187a	.035	.014	511.482	.680
a. Predictors: (Constant), BEBAN OPERASIONAL, CR, DER					
b. Dependent Variable: ROE					

Source: IBM SPSS version 25 Output Data (processed data, 2024)

The results of the output calculation in Table 8 above can be seen that the results of the autocorrelation test on the Durbin-Watson (DW) value are 0.680. The resulting values are between the numbers -2 and +2, so it can be concluded that the regression model used does not autocorrelate.

Multiple Linear Regression Analysis

Multiple linear regression analysis is a technique for constructing equations and using equations to make provisional estimates or conjectures. There are the results of the calculation or testing of multiple linear regression as follows:

Table 9 Multiple Linear Regression Analysis Test Results

Coefficientsa						
Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Mr.
1	(Constant)	600.446	75.804		7.921	.000
	CR	.120	.241	.042	2.497	.030
	THE	-.352	.349	-.086	-2.009	.001
	OPERATIONAL EXPENSES	-.379	.201	-.158	-1.888	.061
a. Dependent Variable: ROE						

Source: IBM SPSS Output Data version 25 (processed data, 2024)

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The results of multiple linear regression analysis produce a regression equation with a constant of 600.446, which means that if the Current Ratio (X1), Debt debt-to-equity ratio (X2), and Operating Expenses (X3) are zero, the Return On Equity (Y) is 600.446. The regression coefficient for the Current Ratio (X1) is 0.120, which indicates that every increase of one unit in the Current Ratio will lead to a decrease in Return On Equity by 0.120 units, with the other variables constant. The Debt-debt-equity ratio (X2) has a regression coefficient of -0.352, indicating that every increase of one unit in the DER will decrease the Return On Equity by 0.352 units. Meanwhile, Operating Expenses (X3) with a regression coefficient of -0.379 indicate that every increase of one unit in Operating Expenses will reduce Return On Equity by 0.379 units, with other variables remaining.

Correlation Coefficient Test (R)

The correlation coefficient (R) is used to determine the level of relationship of independent variables together or simultaneously to dependent variables, namely Current Ratio (X1), Debt to Equity Ratio (X2), and Operating Expenses (X3) to Return On Equity (Y). The results of the correlation coefficient test are as follows:

Table 10 Correlation Coefficient Test Results

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.452a	.904	.014	511.48183
a. Predictors: (Constant), BEBAN OPERASONAL, CR, DER				

Source: IBM SPSS version 25 Output Data (processed data, 2024)

Based on table 10 above, shows that the magnitude of the relationship between the Current Ratio (X1), Debt to Equity Ratio (X2), and Operating Expenses (X3) to Return On Equity (Y) calculated with a correlation coefficient R of 0.452 is in the interval of coefficient 0.40-0.599 which means that there is a sufficient relationship between Current Ratio (X1), Debt to Equity Ratio (X2) and Total Asset Turnover (X3) to Return On Equity (Y).

Determination Coefficient Test (R^2)

The results of the determination coefficient test are as follows:

Table 11 Determination Coefficient Test Results

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.452a	.204	.014	511.48183
a. Predictors: (Constant), BEBAN OPERASONAL, CR, DER				

Source: IBM SPSS version 25 Ouput data (processed data, 2024)

Based on Table 11, the value of R Square (R^2) is 0.904. By calculation, the R^2 value shows that the variable's Current Ratio (X1), Debt to debt-to-equity ratio (X2), and Operating Expenses (X3) have an effect of 20.4% on Return On Equity (Y). This means that the remaining 79.6% of Return On Equity is influenced by other variables that are not included in this study.

Hypothesis Testing

Partial Test (t-Test)

The results of the t-test can be seen in the following table:

Table 12 Partial Test Results (t-Test)

Coefficientsa						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Mr.
		B	Std. Error	Beta		
1	(Constant)	600.446	75.804		7.921	.000
	CR	.120	.241	.042	2.497	.030
	THE	-.352	.349	-.086	-2.009	.001
	OPERATIONAL LOAD	-.379	.201	-.158	-1.888	.061
a. Dependent Variable: ROE						

Source: IBM SPSS version 25 Ouput data (processed data, 2024)

Based on Table 12 above, it can be seen that the calculation of the t-value of the table with the criteria of significance value 0.05 and degree of freedom (dk) = n - k, where n is the number of samples and k is the number of independent variables, then 144 - 3 = 141 is obtained, the t-value of the table is obtained of 1.97693, then the influence of each independent variable on the bound variable can be concluded as follows:

Current Ratio (CR) to Return On Equity (ROE)

The t-value calculated on the Current Ratio (CR) variable is 2.497 and the t-value of the table is 1.97693, then the t-value calculated > t_{table} (2.497 > 1.97693) and the significance value (0.030 < 0.05), then Ho is rejected and Ha is accepted, so it can be concluded that the Current Ratio (CR) has an influence on Return On Equity (ROE) in manufacturing companies in the plantation sub-sector listed on the Indonesia Stock Exchange (IDX) for the 2018-2023 period.

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Debt to Equity Ratio (DER) to Return On Equity (ROE)

The t-value calculated on the Debt to Equity Ratio (DER) variable is -2.009, and the t-value of the table is -1.97693, based on the comparison criteria of the t-value calculated > the t-table (-2.009 > -1.97693) and the significance value (0.001 < 0.05), then Ho is rejected and Ha is accepted, so it can be concluded that the Debt to Equity Ratio (DER) has a negative influence on Return On Equity (ROE) in manufacturing companies in the plantation sub-sector listed on the Indonesia Stock Exchange (IDX) for the 2018-2023 period.

Operating expenses to Return On Equity (ROE)

The t-value calculated on the Operational Expense variable is -0.1888, and the t-value of the table is -1.97693, based on the comparison criteria of the t-value calculated <the t-table (-0.1888 < -1.997693) and the significance value (0.061 > 0.05), then Ho is accepted and Ha is rejected, so it can be concluded that Operational Expense has no significant influence on Return On Equity (ROE) in manufacturing companies in the plantation sub-sector listed on the Indonesia Stock Exchange (IDX) for the 2018-2023 period.

Simultaneous Test (Test F)

The F test is basically to find out whether the independent variables, namely Current Ratio (CR), Debt to Equity Ratio (DER), and Operating Expenses (X3) included in the model, have a joint influence on the dependent variable, namely Return On Equity (ROE) in plantation sub-sector manufacturing companies listed on the Indonesia Stock Exchange (IDX) for the 2018-2023 period. The following is a table of F test results:

Table 13 Simultaneous Test Results (Test F)

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Mr.
1	Regression	1328433.979	3	442811.326	2.993	.021b
	Residual	36625913.021	140	261613.664		
	Total	37954347.000	143			
a. Dependent Variable: ROE						
b. Predictors: (Constant), BEBAN OPERASONAL, CR, DER						

Source: IBM SPSS version 25 Output Data (processed data, 2024)

Based on Table 13 above, using a confidence level of 95% (= 0.05), the value of free degrees (df1 = k - 1) (4 - 1 = 3) and (df2 = n - k) (144 - 4 = 141), then the F value of the $_{table}$ is 2.44 and the F value is calculated as 2.993, then the result obtained $F_{calculates} > F_{table}$ (2.993 > 2.44) and the significance value (0.021 < 0.05), Ho was rejected and Ha was accepted, so it can be concluded that the Current Ratio (CR), Debt to Equity Ratio (DER) and Operating Expenses (X3) have a simultaneous effect on Return On Equity (ROE) in manufacturing companies in the plantation sub-sector listed on the Indonesia Stock Exchange (IDX) for the 2018-2023 period.

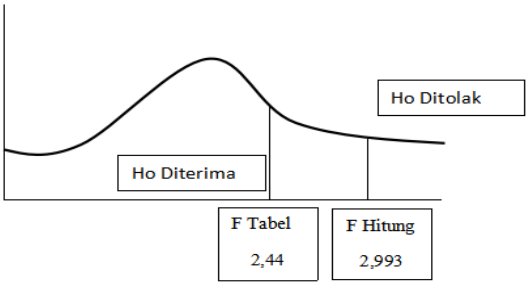

Fig. 8. Test Curve Test Result Area F

Research Discussion

The Influence of Current Ratio (CR) on Return on Equity (ROE)

The results of the partial test with IBM SPSS version 25 show that the Current Ratio (CR) has a significant effect on Return On Equity (ROE) with a t-value of 2.497 > t table 1.97693 and a significance of 0.030 < 0.05. This means that a low CR reduces the company's ability to meet short-term obligations, thus affecting profitability. These findings are consistent with the research Fadhil & Hendratno, (2019) which also found a significant influence of CR on ROE.

The Influence of Debt to Equity Ratio (DER) on Return on Equity (ROE)

The results of the partial test with IBM SPSS version 25 show that the Debt to Equity Ratio (DER) has a significant effect on Return On Equity (ROE) with a t-value of -2.009 > -1.97963 and a significance of 0.001 < 0.05. This shows that a low DER reflects good debt management and improves a company's ability to pay its long-term obligations, while a high DER increases the risk of default. These findings are consistent with research Kusminaini, (2017) which also found a significant effect of DER on ROE.

The Influence of Operating Expenses on Return On Equity (ROE)

The results of the partial test with IBM SPSS version 25 showed that operational expenses did not have a significant effect on Return On Equity (ROE) with a t-

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value of -1.888 < -1.97693 and a significance of 0.061 > 0.05. This means that changes in operating expenses do not directly affect ROE, even though high operating expenses reflect poor financial management. These results are consistent with research Halin, (2018) which also found that operational expenses did not have a significant effect on ROE.

The Influence of Current Ratio (CR), Debt to Asset Ratio (DAR), and Operating Expenses on Return On Equity (ROE)

The results of the simultaneous test (Test F) with IBM SPSS version 26 show that the Current Ratio (CR), Debt to Equity Ratio (DER), and operational expenses together have a significant effect on Return On Equity (ROE), with an F value of 2.993 > F table of 2.44 and a significance of 0.021 < 0.05. This means that the higher the ROE, the higher the net profit generated, reflecting the company's good performance. This finding is in line with Eric's (2020) research, which also found that CR and DER have a significant effect on ROE simultaneously.

CONCLUSION AND RECOMMENDATION

This study concludes that the Current Ratio (CR) and Debt to Equity Ratio (DER) affect the Return on Equity (ROE) of plantation sub-sector companies on the IDX for the 2018-2023 period, while operational expenses have no effect. The t-test showed that CR had a t-value of 2.497 (significance 0.030 < 0.05), and DER -2.009 (significance 0.001 < 0.05). Operating expenses showed a t-value of -0.1888 (significance 0.061 > 0.05). Simultaneous tests with F show that CR, DER, and operational expenses together affect ROE with an F value of 2.993 > F table 2.44. Efforts to increase ROE need to consider long-term debt management that does not exceed own capital, as well as efficiency in the use of operating funds to reduce the risk of default and increase the company's profit.

Based on the conclusions and implications that exist, advice is given to various parties: (a) prospective investors are advised to pay attention to ratios that are directly related to the return on the company's equity as a reference in investment decisions; (b) the company is advised to manage the use of short- and long-term debt optimally to increase profits and attract investors; (c) For academics, this study can be a reference for further studies related to the influence of current ratio, debt to equity ratio, and operational expenses on return on equity.

REFERENCES

Baridwan, Z. (2017). Sistem Akuntansi Penyusunan Prosedur dan Metode. Yogyakarta: YKPN.

Bursa Efek Indonesia. 2024. “Sejarah BEI.” Bursa Efek Indonesia. https://www.idx.co.id/id/tentang-bei/ikhtisar-dan-sejarah-bei (Juni 4, 2024).

Fadhil, M. I., & Hendratno. (2019). Pengaruh Current Ratio (CR), Debt to Equity Ratio (DER), dan Total Asset Turnover (TATO) terhadap Return on Wquity (ROE). (Studi Kasus Perusahaan Sektor Otomotif dan Komponen yang Terdaftar di Bursa Efek Indonesia Tahun 2012-2016) THE IMPACT OF CURRENT RA. E-Proceeding of Management :, 6(2), 2376. www.idx.co.id

Fahmi, I. (2018). Pengantar Manajemen Keuangan Teori dan Soal Jawab,. Bandung : Alfabeta,.

Halin, H. (2018). Pengaruh Kualitas Produk Terhadap Kepuasan Pelanggan Semen Baturaja Di Palembang Pada Pt Semen Baturaja (Persero) Tbk. Jurnal Ecoment Global, 3(2), 79–94. https://doi.org/10.35908/jeg.v3i2.477

Harahap, S. S. (2018). Analisis Kritis atas Laporan Keuangan. Jakarta: (PT. Raja Grafindo Persada).

Kasmir. (2018). Analisis Laporan Keuangan. PT Raja Grafindo Persada.

Kusminaini, A. (2017). Strategi Pengendalian Biaya dalam Upaya Meningkatkan Produktivitas Departemen Makanan dan Minuman (Food & Beverage Department). Sosio E-Kons, 9(2), 132. https://doi.org/10.30998/sosioekons.v9i2.1944

Munawir. (2019). Analisis Laporan Keuangan. Yogyakarta: Liberty.

Sudana. (2015). Teori Dan Praktik Manajemen Keuangan Perusahaan, Edisi 2,. Erlangga, Jakarta.

Sidik, Syarrizal, 2020, “Emiten CPO babak belur dihajar Covid 19”, CNBC Indonesia, https://www.cnbcindonesia.com/market (12 Mei 2024).

Shinta, M. (2013). “Hubungan Kearsipan Dengan Efektifitas Pengambilan Keputusan Pimpinan”,. Universitas Pendidikan Indonesia.

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