

The Effect of Capital Structure, Operating Cash Flow, and Activity Ratio on the Profitability of Agricultural Companies Listed on the Indonesia Stock Exchange

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Abstract

Microeconomics provides a theoretical framework for understanding how a company achieves profit margins, while profit margin is a key measure of performance that reflects the effectiveness of a company's microeconomic strategy, including in agricultural companies. This study aims to analyze the influence of capital structure, operating cash flow, and activity ratio on the profitability of agricultural companies listed on the Indonesia Stock Exchange, especially Crude Palm Oil (CPO) companies. The research approach is quantitative using secondary data from 11 Crude Palm Oil (CPO) agricultural companies for the 2021-2024 period, so that the total data is 44 research data. Data collection uses documentation, namely accessing the official website of the Indonesia Stock Exchange. Data analysis uses multiple regression analysis of panel data. The results of the study show that simultaneously, the capital structure (Debt to Equity Ratio), operating cash flow, and activity ratio (inventory turnover) together have a significant effect on profitability (Net Profit Margin) in Crude Palm Oil (CPO) agricultural sector companies listed on the Indonesia Stock Exchange with a determination coefficient of 81.2172%. While the remaining 18.7828% is explained by other variables that are not studied in this study such as operational cost efficiency, sales and revenue growth levels, raw material prices or production inputs, tax policies and interest expense and price strategies and product competitiveness in the market. Then partially, the capital structure (Debt to Equity Ratio) has a negative and insignificant effect on profitability (Net Profit Margin), operating cash flow has a positive and significant effect on profitability (Net Profit Margin), and activity ratio (inventory turnover) has a positive and significant effect on Profitability (Net Profit Margin).

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INTRODUCTION

Microeconomics is a branch of economics that focuses on the behavior of individual economic units, such as households and companies, in decision-making regarding the allocation of limited resources. Microeconomics focuses its attention on how companies as business actors design production strategies, set prices, and manage costs to achieve efficiency and profitability. One of the important aspects of microeconomics is how a company manages its internal structure, including capital management, cost control, as well as marketing strategies to create added value. As explained by Brigham and Houston (2019), financial management is an important process in maximizing a company's value through optimal investment and funding decision-making. The same thing was also conveyed by Mankiw (2021) who stated that in the microeconomic framework, companies are required to behave rationally and efficiently in order to survive competition and achieve maximum profit goals.

A company's financial performance is the result of a series of managerial decisions that reflect the financial condition of an entity in a given period. One of the main indicators in assessing financial performance is the profitability ratio, especially Net Profit Margin (NPM) has an important role because it measures how much net profit is generated from each sales unit after deducting all expenses, both operational and non-operational. According to Gitman & Zutter (2015), NPM is an important benchmark for investors and managers in assessing the effectiveness of cost control and operational efficiency of companies. In addition, Brigham & Houston (2019) states that profitability through NPM indicators can influence financing decisions and business continuity because it reflects how far the business strategy is being implemented can consistently generate net profits.

According to Setiawan & Agustina (2020); Rasyid & Rahmawati (2019) that Net Profit Margin (NPM) internally can be influenced by capital structure, operational efficiency, asset management, production costs, and pricing strategies. Externally, factors such as changes in raw material prices, macroeconomic conditions, government regulations, and market fluctuations also play a significant role in influencing the level of profitability. Among the many influential variables, the capital structure represented by the Debt to Equity Ratio (DER), operating cash flow, and activity ratios such as inventory turnover are the main focus of this study. The capital structure reflected in the Debt to Equity Ratio (DER) is an important element in financial analysis because it shows the proportion of a company's funding derived from debt compared to its own capital. A healthy capital structure with a

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balanced debt ratio can provide positive leverage if the return on the debt-funded investment is greater than the interest expense. Khoza (2025) said that DER has a significant negative influence on NPM due to the high interest expense which reduces net profit. Rao et al., (2025) said that companies in the energy sector experience a decline in profit margins when DER is at a high level, indicating that the efficiency of debt use greatly determines the level of profitability of companies.

Operating cash flow reflects a company's ability to generate cash from its main business activities. When a company is able to effectively manage its operating cash flow, liquidity stability is maintained, which ultimately supports the company's ability to meet short-term liabilities and finance growth, which has a positive impact on net profit margins. Kariuki (2025) found that there is a positive and significant correlation between cash flow management and profitability, including NPM, especially in the management of operating expenses and short-term debt. This is reinforced by Umoh (2024) that the increase in cash from operational activities correlates with an increase in NPM, indicating that companies that have good operational cash management are better able to create value for shareholders.

Inventory turnover as one of the activity ratio indicators reflects how quickly a company is able to manage and convert its inventory into sales. A high turnover rate generally indicates efficiency in stock management and production capacity, which has a direct impact on increased revenue and net profit margins. Al-Homaidi et al. (2020) show that inventory turnover has a significant positive influence on NPM. Farooq & Sajid (2015) emphasized that companies with efficient inventory management tend to have a higher profitability ratio than companies that are slow to convert inventory into sales.

This research focuses on companies engaged in the agricultural sector, especially the palm oil subsector or Crude Palm Oil (CPO), which plays a strategic role in the Indonesian economy, both in terms of export contributions, labor absorption, and driving regional economic activities. In relation to the microeconomy, CPO companies face challenges in managing working capital, regulating capital structures, and optimizing liquidity to maintain financial performance stability amid global market volatility. The financial performance of these companies strongly reflects the effectiveness of managerial decision-making on a micro-scale, including how they manage financial ratios to maintain profitability. Analysis of CPO companies because they are sectorally relevant, and very appropriate in the microeconomic framework because they can reveal how the behavior and policies of companies on a small scale affect economic efficiency. The fundamental



reason for choosing this CPO company can also be seen from the following company's Net Profit Margin value:

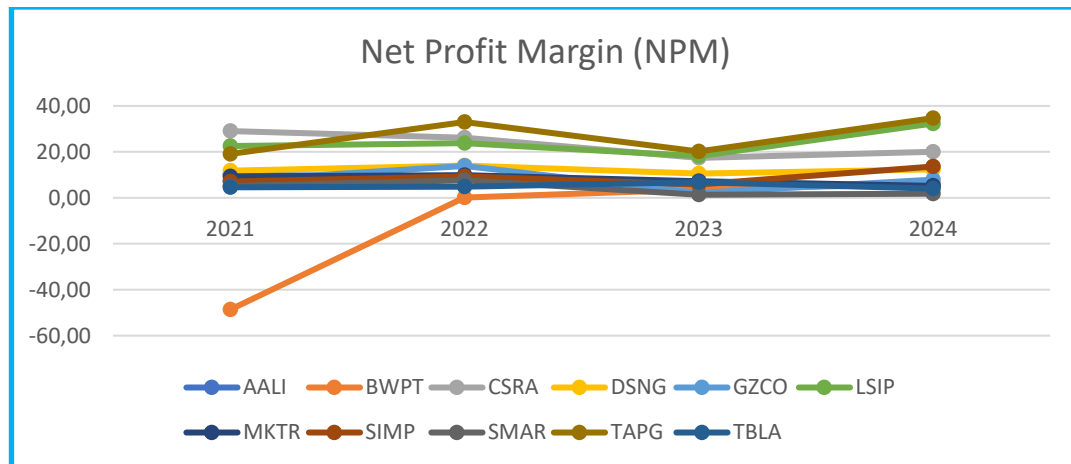


Figure 1: Trend Net Profit Margin (NPM) of Crude Palm Oil (CPO) Agricultural Companies

Based on Figure 1 above, it can be seen that Net Profit Margin (NPM) as an indicator of profitability is an important focus in assessing the company's financial health. However, in reality, the fluctuation in NPM values among Crude Palm Oil (CPO) agricultural sector companies in Indonesia shows quite striking instability from year to year. This condition raises big questions about the effectiveness of the financial and operational strategies carried out by each company in the same industry. For example, PT Eagle High Plantations Tbk (BWPT) experienced a negative NPM of -48.66% in 2021, which then increased drastically to a positive 6.06% in 2024. Meanwhile, PT Sinar Mas Agro Resources and Technology Tbk (SMAR) actually showed a sharp decline from 7.63% in 2022 to only 1.76% in 2024. This trend inconsistency shows that a company's profitability is not only influenced by the selling price of CPO or global market demand alone, but also by internal factors such as capital structure, cash flow efficiency, and inventory management. This indicates the importance of research that delves into specific factors that can explain the rise and fall of NPM in this sector in a more measurable and objective way.

The Net Profit Margin (NPM) inequality that occurs between companies in the Crude Palm Oil (CPO) sector indicates that profitability in this industry is not homogeneous, even though they operate in relatively similar sectors and markets. For example, PT Triputra

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Agro Persada Tbk (TAPG) recorded an increase in NPM from 19.09% in 2021 to 34.69% in 2024, indicating stability and positive profit performance growth. On the other hand, PT Astra Agro Lestari Tbk (AALI), which is one of the major players in this industry, actually showed a decrease in NPM from 10.09% in 2021 to only 5.24% in 2024. This phenomenon reflects differences in the company's ability to manage the factors that contribute to net profit. A decrease in NPM over a certain period of time can indicate managerial inefficiency, an imbalance in the financing structure, or a lack of optimal management of inventory and cash flow. On the other hand, companies with increasing NPM trends tend to have internal management systems that are more adaptive to cost pressures and market dynamics. Therefore, a deeper understanding of the variables that can explain NPM fluctuations is important as a basis for evaluating financial and operational strategies in the future.

Seeing the non-uniform profitability dynamics among Crude Palm Oil (CPO) agricultural sector companies listed on the Indonesia Stock Exchange, there is an urgent need to explore the internal factors that significantly affect the Net Profit Margin (NPM). This research is directed to systematically and quantitatively examine how the capital structure reflected in the Debt to Equity Ratio (DER), operating cash flow as an indicator of internal liquidity, and activity ratio in the form of inventory turnover affect the company's profitability level.

LITERATURE REVIEW

Microeconomics

Microeconomics is a branch of economics that intensively discusses the behavior of individuals and production households in making decisions regarding the allocation of limited resources. The main focus of microeconomics includes demand and supply analysis, market prices, elasticity, and efficiency of the distribution of goods and services. Understanding this concept is very important for analyzing small-scale economic phenomena, including production decisions by MSME actors and household consumption behavior. Saili et al., (2025) show that strengthening the microeconomy through skills training has a significant impact on increasing people's income. Sadofa et al., (2025) also emphasized the importance of working capital in supporting the continuity of small businesses in the local environment.

Net Profit Margin

Net Profit Margin is an indicator of financial efficiency that measures how much net profit a company earns from each unit of revenue. This ratio reflects the company's ability

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to manage costs and generate profits after all tax liabilities and other expenses are deducted. Net profit margin is also a benchmark in evaluating the company's operational management strategy and competitiveness in the long term. Amrulloh et al. (2022) show that net profit margin has a significant relationship with the value of companies in the manufacturing sector. In addition, Ari Ani et al. (2025) emphasized the importance of profitability in influencing investors' decisions on stocks. The formula for calculating it is (Gitman & Zutter, 2015):

$$\text{Net Profit Margin} = \frac{\text{Net Profit}}{\text{Sales/Revenue}} \times 100\%$$

Capital Structure (Debt to Equity Ratio)

The capital structure reflects the composition of the company's financing derived from its own debt and capital. The Debt to Equity (DER) ratio is used to measure how much a company relies on external financing compared to funds from owners. This ratio is an important indicator in measuring financial risk and long-term stability of a company. Alwan & Risman (2023) show that capital structure has a significant influence on company value, especially in capital-intensive industrial sectors. Ayalew (2021) said that an uncontrolled increase in DER can reduce the company's profitability. The formula used in calculating DER is (Gitman & Zutter, 2015):

$$\text{Debt to Equity Ratio} = \frac{\text{Total Liabilities}}{\text{Total Equity}} \times 100\%$$

Operating Cash Flow

Operating cash flow is an important indicator that describes a company's ability to generate cash from its main business activities. This measure reflects operational efficiency and long-term sustainability of financial performance. In practice, companies that have consistently positive operating cash flows are considered more financially healthy because they are able to meet obligations without dependence on external funding. Amelia et al. (2023) show that operating cash flow has a significant influence on profitability, especially in the manufacturing sector. Hanifa & Megawati (2023) said there is a strong correlation between operating cash and company efficiency. The general formula for calculating operating cash flow according to Brigham & Houston (2019) is Operating Cash Flow = Net Income + Non-Cash Expenses ± Changes in Working Capital.



Activity Ratio (Inventory Turnover)

Inventory turnover is an activity ratio that shows how effectively a company manages its merchandise inventory in a given period. This ratio reflects how often inventory is converted into sales, thus becoming an indicator of operational management efficiency and cost control. The higher the inventory turnover value, the better the operational efficiency achieved by the company, because it shows that goods are not stored in the warehouse for too long (Tamtama & Rahmawati, 2023). In addition, Ardini (2025) stated that this ratio has a great influence on profitability, especially in the manufacturing and retail industries that have high stock volumes. The formula for calculating this ratio is (Anggraeni et al., 2023):

$$\text{Inventory Turnover} = \frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$$

METHODOLOGY

This study uses a quantitative approach, which is an approach that focuses on objective measurement and numerical data analysis to gain an understanding of a certain phenomenon (Purba et al., 2024; Ananto et al., 2024). The population in this study is 26 agricultural sector companies listed on the Indonesia Stock Exchange (<https://www.sahamok.net/emiten/sektor-pertanian>). The sampling method in this study is *Purposive Sampling*, which is a sampling method with certain criteria, namely focusing on CPO or Crude Palm Oil companies, which are as many as 11 companies. This research uses secondary data accessed through the Indonesia Stock Exchange (IDX) <https://www.idx.co.id/id>. The data that will be used is 2021-2024 data, so that the number of panel data is 44 research data. The list of companies that are the research sample is presented in Table 1 below:

Table 1: Research Sample

Yes	Company Code	Company Name
1	ALII	PT Astra Agro Lestari Tbk
2	BWPT	PT Eagle High Plantations Tbk
3	CSRA	PT Cisadane Sawit Raya Tbk
4	DSNG	PT Dharma Satya Nusantara Tbk
5	GZCO	PT Gozco Plantations Tbk



6	LSIP	PT PP London Sumatra Indonesia Tbk
7	MKTR	PT Menthobi Karyatama Raya Tbk
8	SIMP	PT Salim Ivomas Pratama Tbk
9	SMAR	PT Sinar Mas Agro Resources and Technology Tbk
10	TAPG	PT Triputra Agro Persada Tbk
11	TBLA	PT Tunas Baru Lampung Tbk

The data analysis in this research uses multiple regression analysis of panel data. Multiple regression analysis of panel data is a multiple regression method that uses combined data, namely time series and cross section data (Ratnasari et al., 2023; Putra et al., 2023; Choudhury & Sahu, 2023). The equation for the regression of the data panel is as follows:

$$NPM_{it} = \alpha_{it} + \beta_1 CS_{it} + \beta_2 OCF_{it} + \beta_3 IT_{it} + \varepsilon$$

Information:

NPM= Net Profit Margin; DER= Debt to Quity Ratio; OCF= Operational Cash Flow; IT= *Inventory Turnover*; α =Kontansta; β =Regression coefficient; ε =Epsilon

RESULTS AND DISCUSSION

Research Results

Descriptive Analysis Results

The results of the descriptive analysis of the variables of profitability (Net Profit Margin), capital structure (Debt to Equity Ratio), operating cash flow, and activity ratio (inventory turnover) in agricultural sector companies Crude Palm Oil (CPO) listed on the Indonesia Stock Exchange are presented in the following table:

Table 2: Descriptive Analysis Results

	NPM?	CS?	OCF?	IT?
Mean	10.70792	120.9189	1.452383	9.779277
Median	9.206242	81.65255	1.071385	6.360604
Maximum	34.69390	496.3755	4.895119	49.26221
Minimum	-48.66122	10.23515	-1.053127	2.417504
Std. Dev.	12.84429	115.3112	1.426690	9.523845
Skewness	-1.808684	1.795162	0.706094	2.643188
Kurtosis	11.81400	5.927675	2.561261	10.12645



Sum	471.1483	5320.430	63.90483	430.2882
Sum Sq. Dev.	7093.958	571757.2	87.52408	3900.256
Observations	44	44	44	44
Cross sections	11	11	11	11

Source: MS Excel Processed Data, 2025

Based on Table 2 above, it can be seen that the profitability variable (Net Profit Margin / NPM) shows a minimum value of -48.66%, which indicates that there are companies in the Crude Palm Oil (CPO) sector that experienced a considerable net loss during the observation period. The maximum value of 34.69% indicates that the company with the best performance is able to generate a net profit of 34.69% of total revenue. The average NPM value of 10.70% with a standard deviation of 12.84% indicates that the level of profitability between CPO companies is relatively fluctuating and not uniform. This condition shows the inequality of financial performance, where some companies are quite efficient in managing costs and revenues, while others face pressure in terms of production costs or fluctuating selling prices of CPO in the global market.

The variable capital structure (Debt to Equity Ratio / DER) has a minimum value of 10.23%, indicating that there are companies that use debt financing in a very low proportion compared to their own capital, indicating a conservative financial structure. On the other hand, the maximum value of 496.37% reflects the existence of companies with a high dependence on debt in financing their operational activities. The average DER of 120.91% with a standard deviation of 115.31% illustrates that most companies have a fairly high level of leverage but are still within the limits of reasonableness for capital-intensive industries such as CPO. The greater average value of the standard deviation indicates that the variation in debt levels between companies is not too extreme, indicating a trend of relatively consistent financing patterns in the sector.

The variable operating cash flow (OCF) has a minimum value of -1.05 trillion rupiah, indicating that there are companies that experience negative cash flows due to high operating costs or decreased revenues from main activities. Meanwhile, the maximum value reached 4.89 trillion rupiah, which shows the ability of the best-performing companies to generate strong cash from operational activities. The average value of 1.45 trillion rupiah with a standard deviation of 1.43 trillion rupiah shows a relatively stable condition, because the average is greater than the standard deviation. This means that the majority of companies are able to maintain a fairly good positive cash flow stability,



reflecting the efficiency of financial management and the ability to maintain liquidity in the midst of fluctuations in commodity prices.

The activity ratio variable (inventory turnover) shows a minimum value of 2.42 times, which means that there are companies that take a relatively long time to sell or replace their inventory. A maximum value of 49.26 times indicates that there are companies that are very fast in managing the inventory cycle up to dozens of times a year, indicating a high level of efficiency in operations and marketing. The average value of 9.78 times with a standard deviation of 9.52 times illustrates dynamic conditions, but since the average is greater than the standard deviation, it can be concluded that the efficiency of inventory management in most companies is relatively good and stable. This shows that supply chain management in the CPO sector tends to be effective in adjusting between production, stock, and market demand.

Panel Data Regression Model Selection Testing

In the selection of the panel data regression model, there are 3 regression models, namely *Common Effect*, *Fixed Effect* and *Random Effect*. So that in choosing the appropriate model, there are 2 test stages, namely the *Chow Test* and the *Hausman Test*. The following are the test results in the selection of the panel data regression model:

a. Chow Test

The chow test is a test that aims to select a *common model* with a fixed model. The following table 3 illustrates the results of the chow test using the *E-Views 9* program:

Table 3: Chow Test

Redundant Fixed Effects Tests			
Pool: Untitled			
Test cross-section fixed effects			
Effects Test	Statistics	D.F.	Prob.
Cross-section F	15.614661	(10,30)	0.0000

Source: Data Processing *E-Views 9*, 2025

Based on the results of *Chow's* test above, it was found that the significance of *Cross Section F* was 0.0000. This value is greater than the alpha value of 0.05 (5%), so the *Fixed Effect Model* (FEM) is better used than the *Common Effect Model* (CEM). With



the use of the *Fixed Effect Model* (FEM), it is necessary to carry out further testing (*Hausman test*).

b. Hausman Test

The Hausman test is a test that aims to select a *random* model with a *fixed* model. The following table 4 illustrates the *results of the third* test using the help of the E-Views 9 program:

Table 4: Hausman Test

Correlated Random Effects - Hausman Test			
Pool: Untitled			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistics	Chi-Sq. D.F.	Prob.
Cross-section random	8.938745	3	0.0301

Source: Data Processing E-Views 9, 2025

Based on table 3 above, it was found that the significance of the *Chi Square Statistic* was smaller than the alpha value of 0.05 ($0.0301 < 0.05$). So that hypothesis testing is carried out with the *Fixed Effect Model* (FEM) model to obtain better test results

Classic Assumption Testing

a. Residual Normality

The results of normality testing using the *help of the E-Views 9 Program* are as follows:

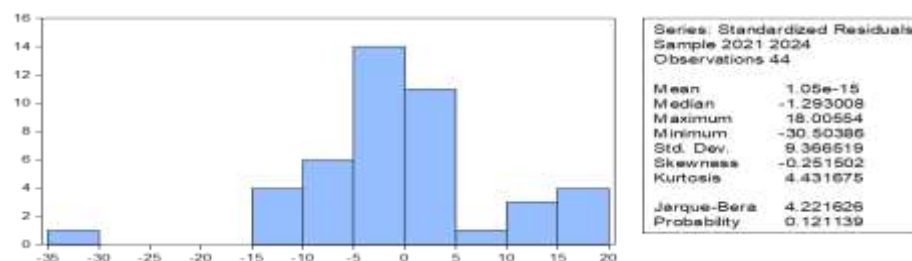


Figure 2: Normality Test Results

Source: E-Views Data Processing Version 9, 2025

Based on the image above, it can be seen that the value of *Jarque Bera* (JB) is 4.222 with a probability value of 0.121. The probability or significance value is greater than 0.05 so that H_0 is accepted, the data in this study meets the normality test (normally distributed data).

b. Autocorrelation Testing

The results of the Durbin Watson *method autocorrelation test* are shown in the following table 5

Table 5: Autocorrelation Test Results

Dependent Variable: NPM?			
Method: Pooled EGLS (Cross-section weights)			
F-statistic	15.30255	Durbin-Watson stat	1.714287
Prob(F-statistic)	0.000000		

Source: *E-Views Data Processing Version 9, 2025*

Based on the table above, the value of *Durbin Watson* is 1.714287. The *Durbin Watson* value is located between the value of -2 to +2 ($-2 < 1,714 < +2$). So that it can be concluded that the data is in a state of meeting the autocorrelation test.

c. Data Heterokedasticity Testing

The following data processing results test heterokedasticity using the Glejser heterokedasticity method:

Table 6: Heterokedasticity Test Results

Dependent Variable: ABSOLUT_RESIDUAL?				
Method: Pooled Least Squares				
Date: 09/19/25 Time: 07:33				
Sample: 2021 2024				
Included observations: 4				
Cross-sections included: 11				
Total pool (balanced) observations: 44				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.353158	2.791207	0.126525	0.9002
CS?	0.031879	0.017999	1.771167	0.0867
OCF?	-0.339034	0.727209	-0.466212	0.6444
IT?	0.019279	0.095506	0.201857	0.8414

Source: *E-Views Data Processing Version 9, 2025*



Based on the results of the output above, it can be seen that the *probability* value of the capital structure (Debt to Equity Ratio) is 0.0867. The *probability* value of operating cash flow is 0.6444 and the *probability* value of the activity ratio (inventory turnover) is 0.8414. Based on these results, the *probability value* of the glycer test is greater than alpha 0.05 so that the regression model in this study is not affected by heterokedasticity symptoms.

d. Data Multicollinearity Testing

Based on the data processing that has been carried out previously, the *Variance Inflation Factor* (VIF) of each variable is as follows:

Table 7: Multicollinearity Test Results

Variable	R-Square Value	VIVID	Conclusion
Capital structure (Debt to Equity)	0.114783	1.129	Meets the Multicollinearity test
Operating cash flow	0.231324	1.301	
Activity ratio (inventory turnover)	0.100606	1.112	

Source: *E-Views Data Processing Version 9, 2025*

Based on the results of the above data processing, it was found that the VIF value for the variable capital structure (Debt to Equity Ratio) was 1,129. The value of operating cash flow VIF is 1,301 and for the activity ratio (inventory turnover) is 1,112. The VIF value is lower than the standard of 10, so it is concluded that the regression model does not have a multicollinearity problem.

1. Multiple Regression Equations

The results of the analysis with the help of the E-Views 9 program are shown in table 8 as follows:

Table 8: Multiple Regression Analysis Results

Dependent Variable: NPM?		
Method: Pooled EGLS (Cross-section weights)		
Date: 09/19/25 Time: 07:34		
Sample: 2021 2024		
Included observations: 4		
Cross-sections included: 11		



Total pool (balanced) observations: 44				
Linear estimation after one-step weighting matrix				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.060422	3.126156	2.578382	0.0151
CS?	-0.016952	0.025705	-0.659486	0.5146
OCF?	1.340094	0.349415	3.835251	0.0006
IT?	0.281310	0.050629	5.556291	0.0000
Fixed Effects (Cross)				
_AALI--C	-5.914159			
_BWPT--C	-14.55886			
_CSRA--C	12.81028			
_DSNG--C	1.681725			
_GZCO--C	-5.664063			
_LSIP--C	12.74017			
_MKTR--C	-4.455634			
_SIMP--C	-3.679933			
_SMAR--C	-6.606641			
_TAPG--C	14.48693			
_TBLA--C	-0.839810			
Cross-section fixed (dummy variables)				
R-squared	0.868957	Mean dependent var	24.36047	
Adjusted R-squared	0.812172	S.D. dependent var	17.77009	
S.E. of regression	6.711433	Sum squared resid	1351.300	
F-statistic	15.30255	Durbin-Watson stat	1.714287	
Prob(F-statistic)	0.000000			

Source: E-Views version 9, 2025

Based on the numbers in the *Unstandardized Coefficients* column, the multiple regression equation is as follows:

$$\hat{Y} = 8.0604 - 0.0169X_1 + 1.3401X_2 + 0.2813X_3 + e$$

Based on the regression equation model above, it can be interpreted that the constant value of 8.0604 indicates that if there is no influence from the variables of capital structure (Debt to Equity Ratio), operating cash flow, and activity ratio (inventory turnover),

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then the profitability value (Net Profit Margin) in agricultural sector companies Crude Palm Oil (CPO) listed on the Indonesia Stock Exchange is 8.0604%.

The value of the Debt to Equity Ratio regression coefficient of -0.0169, indicates that every increase in the capital structure (Debt to Equity Ratio) of 1% will decrease (due to -) the profitability (Net Profit Margin) of Crude Palm Oil (CPO) agricultural sector companies listed on the Indonesia Stock Exchange by 0.0169% assuming other variables *are ceteris paribus*. The value of the operating cash flow regression coefficient is 1.3401, indicating that every increase in the number of operating cash flows of 1 trillion will increase (due to the + mark) the profitability (Net Profit Margin) in agricultural sector companies Crude Palm Oil (CPO) listed on the Indonesia Stock Exchange by 1.3401% assuming other variables *are ceteris paribus*. The value of the regression coefficient of the activity ratio (inventory turnover) is 0.2813, indicating that every increase in the activity ratio (inventory turnover) by 1 time will increase (due to the sign +) the profitability (Net Profit Margin) in agricultural sector companies Crude Palm Oil (CPO) listed on the Indonesia Stock Exchange by 0.2813% assuming other variables *are ceteris paribus*.

The test was then followed by the determination coefficient and hypothesis testing as follows:

a. Simultaneous Test Results

Based on the table above, the F-calculation value is 15.30255 and the significance value is 0.000000. The significance value is less than 0.05 so the hypothesis is accepted. This means that the capital structure (Debt to Equity Ratio), operating cash flow, and activity ratio (inventory turnover) together have a significant effect on profitability (Net Profit Margin) in Crude Palm Oil (CPO) agricultural sector companies listed on the Indonesia Stock Exchange. The results of this simultaneous influence mean that the combination of capital structure, operating cash flow, and inventory turnover efficiency is able to determine the level of profitability of companies in the CPO agricultural sector. This means that the balance of debt utilization, the ability to generate cash from operations, and the speed of stock management have an important contribution to improving the company's net profit performance.

b. Coefficient of Determination

Based on the results of the analysis of the determination coefficient in the table above, it shows that the magnitude of the determination coefficient or *Adjusted R Square* number is 0.812172. This value shows that the 81.2172% profitability variability (Net Profit

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Margin) in Crude Palm Oil (CPO) agricultural sector companies listed on the Indonesia Stock Exchange can be explained by the capital structure (Debt to Equity Ratio), operating cash flow, and activity ratio (inventory turnover). While the remaining 18.7828% is explained by other variables that are not studied in this study such as operational cost efficiency, sales and revenue growth levels, raw material prices or production inputs, tax policies and interest expenses and pricing strategies and product competitiveness in the market

c. Partial Testing

1) The Effect of Capital Structure (Debt to Equity Ratio) on the Company's Sustainability Performance

Based on the analysis, the t-calculated value was -0.659486 and the significance value was greater than the probability value of 0.05 ($0.5146 > 0.05$), the capital structure (Debt to Equity Ratio) had a negative effect on the profitability (Net Profit Margin) in agricultural sector companies Crude Palm Oil (CPO) listed on the Indonesia Stock Exchange. The result of a negative coefficient is not significant, meaning that the higher the proportion of debt in the company's capital structure, it will have the potential to reduce the net profit generated by the CPO agricultural sector company, but nevertheless the negative impact of debt does not significantly reduce profits. This can happen because the company's funding structure is still relatively stable, and management is able to balance its own capital use and debt in keeping operations running efficiently.

2) The Effect of Operating Cash Flow on the Company's Sustainability Performance

Based on the analysis, the t-calculated value was 3.835251 and the significance value was smaller than the probability value of 0.05 ($0.0006 < 0.05$), so the operating cash flow had a positive and significant effect on profitability (Net Profit Margin) in Crude Palm Oil (CPO) agricultural sector companies listed on the Indonesia Stock Exchange. The positive and significant coefficient results show that the larger the operating cash flow generated, the higher the profitability level of CPO agricultural companies. This condition indicates that the company's ability to generate cash from its main activities is very important to support business sustainability. Positive cash flow reflects the efficiency of revenue and expense management, so that the company has flexibility in financing operational activities, paying liabilities, and developing investments that lead to increased net profit.



3) The Effect of Activity Ratio (inventory turnover) on the company's sustainability performance

Based on the analysis, the t-calculated value was obtained of 5.556291 and the significance value was smaller than the probability value of 0.05 ($0.0000 < 0.05$), so the activity ratio (inventory turnover) had a positive and significant effect on the Profitability (Net Profit Margin) in Crude Palm Oil (CPO) agricultural sector companies listed on the Indonesia Stock Exchange. The results of positive and significant coefficients show that efficiency in managing and accelerating inventory turnover is able to increase the profitability of companies in the CPO agricultural sector. Companies that are able to sell products quickly will gain faster cash flow, reduce storage costs, and reduce the risk of damage to goods. This condition indicates that good inventory management not only improves operational efficiency, but also has a direct impact on increasing the profit margins obtained by the company.

DISCUSSION

Profitability in particular Net Profit Margin (NPM) reflects how efficiently a company manages its revenue after all costs are deducted, making it a key indicator of business sustainability and long-term competitiveness. In agribusiness industries such as Crude Palm Oil (CPO), fluctuations in commodity prices and dependence on exports demand that companies maintain profitability at optimal levels in order to survive unstable business cycles. Rudolph & Aliamutu (2025) shows that the strengthening of NPM has a direct impact on long-term financial performance in the context of emerging economies. Amrulloh and Hartono (2025) emphasized that NPM plays an important role in maintaining company value in the midst of market pressure. According to Mandviwala et al., (2025), good profitability significantly supports operational efficiency as well as attracts investor interest through lower risk perception.

The results of multiple regressions showing that the capital structure (Debt to Equity Ratio), operating cash flow, and activity ratio (inventory turnover) together had a significant effect on profitability (Net Profit Margin) in Crude Palm Oil (CPO) agricultural sector companies listed on the Indonesia Stock Exchange with a determination coefficient of 81.2172%. While the remaining 18.7828% is explained by other variables that are not studied in this study such as operational cost efficiency, sales and revenue growth levels, raw material prices or production inputs, tax policies and interest expense and price strategies and product competitiveness in the market. When companies are able to manage debt proportionately, they can minimize the cost of capital and optimize healthy

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financial leverage (Abubakar & Ajao, 2022). Cash flow from strong operating activities also reflects the company's fundamental health, which positively impacts net profit (Huang et al., 2022). Meanwhile, the speed in inventory turnover indicates logistics agility and efficient meeting of market demand, which directly strengthens profit margins (Effendi et al., 2022). This combination makes these three variables a determining pillar of profitability that cannot be ignored in a long-term financial strategy.

The capital structure (Debt to Equity Ratio) has a negative effect on the Net Profit Margin in Crude Palm Oil (CPO) agricultural sector companies listed on the Indonesia Stock Exchange. This condition reflects management's ability to manage financial risks posed by debt-based financing. A high proportion of debt does have the potential to lower profit margins due to interest expense and other fixed liabilities, but the statistical insignificance suggests that companies are able to maintain operational stability through efficient fund management (Muslim et al., 2024). In the agricultural sector such as Crude Palm Oil, the stability of cash flow and the value of assets that support loans are factors that moderate debt pressures (Bunyaminu et al., 2025). Meanwhile, Azizah et al. (2023) said that a carefully managed debt ratio in combination with operational efficiency is able to minimize negative impacts on the company's profit performance

Operating cash flow has a positive and significant effect on profitability (Net Profit Margin) in Crude Palm Oil (CPO) agricultural sector companies listed on the Indonesia Stock Exchange. Strong operating cash flow reflects the company's ability to generate funds from core business activities, which ultimately strengthens its net profit position on a sustainable basis. As cash flow from operations increases, companies have greater financial flexibility to fund production, pay short-term liabilities, and realize productive investments without relying on high-cost external sources (Salas-Molina, 2024). Ajibolade & Akinyoade (2021) also emphasized that cash flow from operational activities is the most accurate indicator of a company's profit performance in asset-based sectors such as agriculture and manufacturing. Pradana and Yusuf (2023) revealed that efficiency in revenue management and operational cost control reflected in cash inflows have a direct impact on encouraging profitability, making it a strategic instrument in the sustainability of agribusiness businesses.

The activity ratio (inventory turnover) has a positive and significant effect on the Net Profit Margin in Crude Palm Oil (CPO) agricultural sector companies listed on the Indonesia Stock Exchange. Efficiency in inventory management plays a crucial role in strengthening profitability, especially in time- and quality-sensitive sectors such as the CPO industry. High inventory turnover reflects a company's ability to convert goods into

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revenue quickly, which has a direct impact on increasing profit margins. This condition not only reduces storage costs and the risk of deteriorating quality, but also strengthens the company's cash cycle that supports operational continuity (Mulyana et al., 2023). The efficiency of activities such as inventory turnover has a positive influence on profit performance because it increases the capacity to respond to market demand (Yuliansyah et al., 2022). Similar results were also found by Prastyo (2025) which highlights the importance of rotation of operational assets in creating added value for companies in the agribusiness sector.

The success of Crude Palm Oil (CPO) agricultural sector companies in increasing profitability is greatly influenced by a combination of financial strategy and operational efficiency. Although the debt-based capital structure has not shown a significant impact on net profit, operating cash flow and inventory turnover effectiveness have proven to be key factors that significantly strengthen the company's profitability performance. These results show that cash management of core activities as well as responsive inventory cycle management play a vital role in maintaining financial stability and growth. Therefore, the company's management needs to focus more on optimizing operational activities and cash flow efficiency, while continuing to control the composition of the capital structure to remain balanced and sustainable in the face of the dynamics of the agribusiness industry.

CONCLUSION AND RECOMMENDATIONS

Based on the results of the research and the discussion in the previous chapter, several conclusions of the research can be drawn as follows:

1. The capital structure (Debt to Equity Ratio) has a negative effect on the Net Profit Margin in Crude Palm Oil (CPO) agricultural sector companies listed on the Indonesia Stock Exchange.
2. Operating cash flow has a positive and significant effect on profitability (Net Profit Margin) in Crude Palm Oil (CPO) agricultural sector companies listed on the Indonesia Stock Exchange.
3. The activity ratio (inventory turnover) has a positive and significant effect on the Net Profit Margin in Crude Palm Oil (CPO) agricultural sector companies listed on the Indonesia Stock Exchange.
4. Capital structure (Debt to Equity Ratio), operating cash flow, and activity ratio (inventory turnover) together have a significant effect on profitability (Net Profit Margin) in Crude Palm Oil (CPO) agricultural sector companies listed on the Indonesia Stock Exchange with a determination coefficient of 81.2172%. While the remaining 18.7828% is

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explained by other variables that are not studied in this study such as operational cost efficiency, sales and revenue growth levels, raw material prices or production inputs, tax policies and interest expenses and pricing strategies and product competitiveness in the market

Based on the conclusions of the study, Crude Palm Oil (CPO) agricultural sector companies listed on the Indonesia Stock Exchange are advised to strengthen operational cash management strategies and optimize inventory management to increase profitability which is still fluctuating. Inequality in Net Profit Margin, with companies experiencing large losses, shows the importance of cost efficiency and precision control of cost of production. Companies need to ensure that cash flows from key activities remain positive and stable to maintain liquidity and sustain growth. In addition, given the significant variation in inventory turnover, improved supply chain coordination and the adoption of adaptive logistics technologies will support operational efficiency. In terms of capital structure, a cautious approach to the use of debt is needed, given the existence of companies with very high leverage that are at risk to financial resilience. Periodic evaluation of the proportion of debt and capital itself must be part of long-term financial policy to maintain stability and sustainable profitability.

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