

The Role of Cash Conversion Cycle Components in Determining Profitability

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ABSTRACT

This study aims to investigate the role of cash conversion cycle components, namely Account Receivable Days, Account Payable Days, and Inventory Days., in determining the profitability of manufacturing companies in the plastic and packaging sub-sector listed on the Indonesia Stock Exchange. Profitability is measured using the Return on Assets (ROA) indicator. Utilizing a quantitative approach, this research applies purposive sampling to select companies that consistently publish annual financial reports during the observation period. The analysis employs multiple linear regression, supported by classical assumption tests to ensure the robustness of the model. The findings demonstrate that each component of the cash conversion cycle affects profitability differently. Account Receivable Days tend to have a negative relationship with profitability, suggesting longer collection periods may hinder performance. Conversely, Account Payable Days show a potential positive influence, indicating that extended payment terms may support liquidity and profitability. Inventory Days also play a significant role, contingent upon the company's operational efficiency. These insights are valuable for financial managers and investors in optimizing working capital management strategies to enhance overall profitability.

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INTRODUCTION

In today's highly competitive business landscape, companies are increasingly expected to maintain operational efficiency while optimizing financial performance. Particularly in the manufacturing sector, managing the flow of working capital has become a strategic priority, as it directly influences profitability and long-term sustainability. Efficient working capital management enables firms to meet short-term obligations and allocate resources to growth-enhancing activities (Brigham & Houston, 2010).

One of the critical indicators of working capital efficiency is profitability, often measured using Return on Assets (ROA). ROA reflects how effectively a company utilizes its assets to

generate profit. According to Kasmir (2016), ROA provides a comprehensive view of a company's ability to convert its total assets into net income, thus serving as a crucial benchmark for performance evaluation.

Among the variables that shape working capital efficiency, Account Receivable Days (AR Days), Account Payable Days (AP Days), and Inventory Days play a pivotal role. AR Days indicate the average time taken by a company to collect payment after a sale, which affects cash availability for daily operations. As Munawir (2010) explains, prolonged collection periods may lead to liquidity constraints, reducing the firm's ability to invest and potentially lowering profitability.

Conversely, AP Days reflect the average period a company takes to settle its trade payables. Extending this period can provide short-term financing advantages, allowing firms to deploy cash in profit-generating activities (Riyanto, 2013). However, excessive delays can harm supplier relationships and result in the loss of favorable credit terms. Therefore, managing AP Days requires a strategic balance between liquidity and supplier trust.

Inventory Days measure how long goods remain in storage before being sold. A shorter inventory cycle typically indicates effective inventory management, reducing holding costs and increasing turnover. According to Jumingan (2006), firms with slow inventory turnover may experience excessive storage costs and obsolescence risks, which negatively affect profitability.

The plastic and packaging sub-sector in Indonesia presents a relevant context for examining these variables. This sub-sector plays an integral role in supporting industries such as food and beverage, pharmaceuticals, and consumer goods. However, companies within this industry have demonstrated fluctuating levels of profitability, partly due to variations in how they manage their working capital components (Soedjatmiko, 2015).

Previous empirical studies have produced mixed results concerning the relationship between working capital components and profitability. For instance, research by Alipour (2011) found a negative relationship between AR Days and profitability, while Bana Abuyazed (2012) observed a positive effect. These inconsistencies signal the need for further investigation, particularly in emerging markets like Indonesia, where financial management practices vary significantly among firms.

Furthermore, studies by Tauringana and Afrifa (2013) and Edison Hamid (2020) highlight that Inventory Days can have both positive and negative implications, depending on a firm's inventory strategy and operational efficiency. This variation underscores the complexity of inventory management and its influence on financial performance.

Given the inconclusive findings in existing literature and the dynamic nature of manufacturing operations in the plastic and packaging industry, this study aims to analyze the impact of AR Days, AP Days, and Inventory Days on profitability. The objective is to provide insights that are not only academically relevant but also practically beneficial for financial decision-makers and stakeholders. By examining data from manufacturing companies listed on the Indonesia Stock Exchange, this research intends to contribute to the understanding of how working capital management can be optimized to enhance profitability. The findings are expected to inform both managerial practices and future research in the field of financial performance evaluation.

METHODS

This study adopts a quantitative approach to examine the effect of Account Receivable Days (AR Days), Account Payable Days (AP Days), and Inventory Days on profitability in manufacturing companies within the plastic and packaging sub-sector. The use of a quantitative method allows for a structured and statistical assessment of the relationship between working capital management and financial performance, measured using Return on Assets (ROA).

The population of this study includes all manufacturing firms in the plastic and packaging sub-sector listed on the Indonesia Stock Exchange. From this population, a purposive sampling technique was employed to select companies that met specific criteria. The selected firms must have consistently published annual financial statements during the five-year observation period and have total market capitalization above a predetermined threshold. This sampling method was chosen to ensure that the selected companies possess sufficient data and financial maturity for meaningful analysis.

The final sample consisted of six manufacturing companies, each observed over a five-year period, resulting in a panel data set. This combination of cross-sectional and time-series data strengthens the validity of the findings, as it captures variations both between companies and across time. The financial data, including total assets, net income, receivables, payables, and inventory values, were obtained from official financial reports published on the Indonesia Stock Exchange's website.

The dependent variable in this study is profitability, measured by Return on Assets (ROA), which reflects the company's efficiency in generating net income from its total assets. The independent variables include AR Days, AP Days, and Inventory Days, representing the key components of working capital management. Each variable is measured using standard financial ratios based on industry-accepted formulas, as previously adopted in studies by Alipour (2011) and Tauringana and Afrifa (2013).

To ensure the reliability and validity of the regression model, the data were first analyzed using descriptive statistics. This analysis provides insights into the central tendencies and dispersion of each variable, such as mean, maximum, minimum, and standard deviation. It also serves as a preliminary check for outliers or unusual patterns that might distort the regression results.

Prior to hypothesis testing, classical assumption tests were conducted to meet the requirements of the linear regression model. These tests include normality, multicollinearity, heteroskedasticity, and autocorrelation checks. The Kolmogorov-Smirnov test was used to assess the normality of residuals, while Variance Inflation Factor (VIF) values were examined to detect multicollinearity. Scatterplots and Durbin-Watson statistics were used to evaluate heteroskedasticity and autocorrelation, respectively.

Multiple linear regression analysis was then applied to examine both the individual (partial) and combined (simultaneous) effects of the independent variables on profitability. The regression model helps determine the significance and direction of each relationship, with hypothesis testing conducted at a standard confidence level. The software used for statistical analysis was SPSS, which provided a robust platform for managing data and generating interpretative output.

RESULTS AND DISCUSSION

Research Data

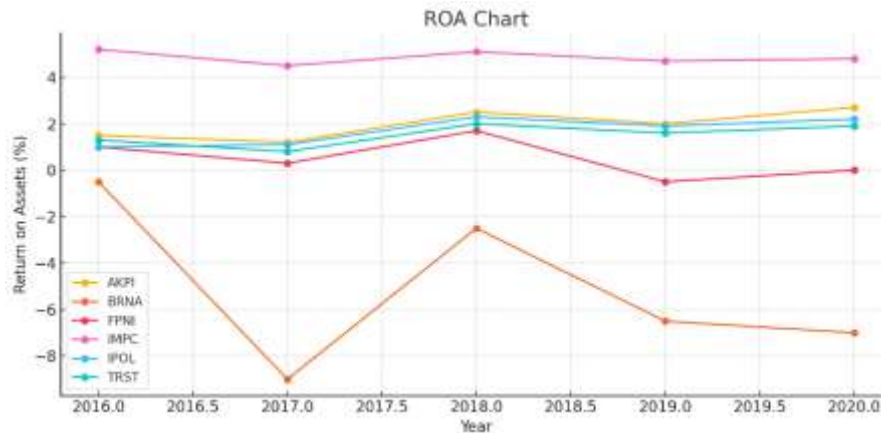


Figure 1. ROA Chart

The chart above shows that PT Impack Pratama Industri Tbk (IMPC) recorded the highest Return on Assets (ROA) from 2016 to 2020, consistently exceeding 3% each year. In contrast, PT Berlina Tbk (BRNA) had the lowest ROA, experiencing losses almost every year throughout the same period.



Figure 2. AR Days Chart

Lotte Chemical Titan Tbk (FPNI) consistently recorded the shortest accounts receivable collection period, remaining below 20 days. In contrast, Indopoly Swakarsa Industry Tbk (IPOL) had the longest collection time, exceeding 80 days to convert credit sales into cash.

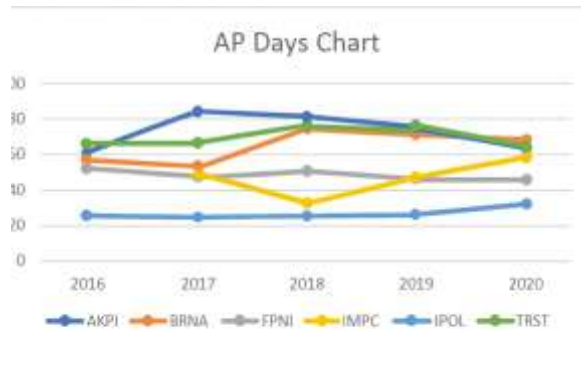


Figure 3. AP Days Chart

Based on the AP Days chart, Indopoly Swakarsa Industry Tbk (IPOL) had the shortest trade payables payment period, consistently under 40 days from 2016 to 2020. In contrast, other companies enjoyed longer payment terms. In 2020, BRNA, IMPC, and TRST recorded AP Days around 60 days.

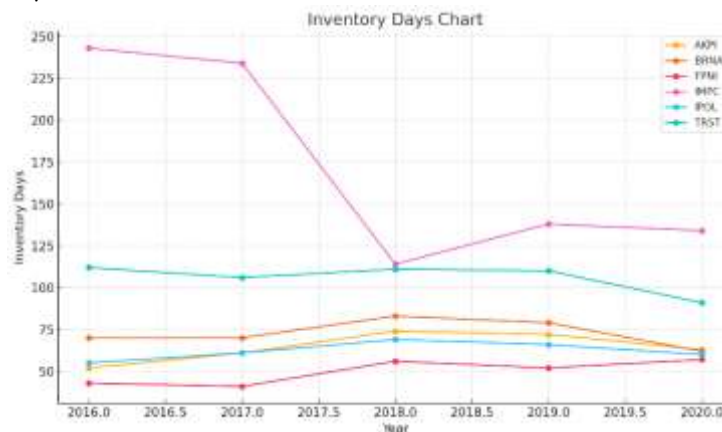


Figure 4. Inventory Days Chart

In the Inventory Days chart, PT Impack Pratama Industri Tbk (IMPC) held unsold inventory for over 200 days on average in 2016 and 2017. However, from 2018 to 2020, the company successfully reduced its inventory days to below 150. Meanwhile, the other five companies (AKPI, BRNA, FPNI, IPOL, and TRST) maintained inventory levels between 50 and 100 days.

Descriptive Analysis

To provide a clear overview of the data distribution and make the data easier to understand, descriptive analysis is used. In this study, the descriptive statistics include the mean, median, maximum, minimum, and standard deviation. The following presents the descriptive statistics for ROA, AR Days, AP Days, Inventory Days, and Size of companies in the plastic and packaging sub-sector listed on the Indonesia Stock Exchange during the period from 2016 to 2020.

Table 1. Description of Manufacturing Companies in the Plastic and Packaging Sub-sector Listed on the Indonesia Stock Exchange (IDX)

Variable	ROA (%)	AR Days (in Days)	AP Days (in Days)	Inventory Days (in Days)	Size (IDR)
Mean	0.59	63	53	88	2,939,583,095,933
Median	1.09	70	55	72	2,670,683,889,378
Maximum	5.53	95	83	244	4,349,022,887,699
Minimum	-8.68	8	22	43	1,964,877,082,000
Standard Dev.	3.58	26	18	49	779,070,072,338

Table 1 presents the descriptive statistics for several financial variables of manufacturing companies in the plastic and packaging sub-sector listed on the Indonesia Stock Exchange (IDX) from 2016 to 2020. The average Return on Assets (ROA) was recorded at 0.59%, indicating that, on average, companies generated a post-tax profit of that amount for every rupiah of total assets. The highest ROA was achieved by PT Impack Pratama Industri Tbk in 2016 at 5.53%, while the lowest was -8.68% by PT Berlina Tbk in 2020. The standard deviation of ROA was 3.58%, reflecting a moderate level of variability. For the Accounts Receivable (AR) Days, companies required an average of 63 days to collect receivables from credit sales. The longest collection period occurred at PT Indopoly Swakarsa Industry Tbk in 2018, which took 95 days. Conversely, PT Lotte Chemical Titan Tbk had the shortest AR Days at only 8 days in 2019. The standard deviation was 26 days, indicating some fluctuation in receivables turnover across the sample.

The Accounts Payable (AP) Days, reflecting the delay in settling trade payables, averaged 53 days. The longest delay was observed at PT Argha Karya Prima Industry Tbk in 2017 with 83 days, while PT Indopoly Swakarsa Industry Tbk recorded the shortest period of 22 days in the same year. The standard deviation for AP Days stood at 18 days. Regarding Inventory Days, companies took an average of 88 days to convert inventory into sales. PT Impack Pratama Industri Tbk had the longest conversion period in 2016 with 244 days, while PT Lotte Chemical Titan Tbk in 2017 managed to convert its inventory within just 43 days. The standard deviation for this variable was relatively high at 49 days.

Company size, measured by total assets, averaged IDR 2.9 trillion. The largest asset base was owned by PT Trias Sentosa Tbk in 2019, reaching IDR 4.3 trillion, while PT Berlina Tbk had the smallest asset value at IDR 1.9 trillion in 2017. The standard deviation for company size was IDR 779 billion, indicating considerable variation in firm size within the sample.

Classical Assumption Testing

Normality Test

The normality test is conducted to determine whether the data are normally distributed, which is a prerequisite for multiple linear regression analysis. This study applied the Kolmogorov-Smirnov test using Microsoft Excel's Data Analysis Toolpak.

Table 2. Normality Test Statistics

Statistic	ROA	AR DAYS	AP DAYS	INVENTORY DAYS
Sample Size (N)	30	30	30	30
Mean	0.0059	63.2793	52.8187	88.4219
Standard Deviation	0.0358	25.8068	17.6935	48.6007
D _n (Kolmogorov Value)	0.1912	0.6726	0.7747	0.7152
Normality	Normal	Normal	Normal	Normal

Based on the table above, the results of the normality test indicate that all variables are normally distributed. The regression results show that the normality distribution values are: ROA at 0.1912, AR Days at 0.6726, AP Days at 0.7747, and Inventory Days at 0.7152. Since all significance values are greater than 0.05, the data can be considered normally distributed.

Multicollinearity Test

The purpose of the multicollinearity test in this study is to determine whether there is a strong correlation among the independent variables in the regression model. A good regression model should not exhibit multicollinearity.

Table 3. Multicollinearity Test Results

Variables	Correlation	Tolerance	VIF
ARD – APD	0.00832	0.99993	1.0001
ARD – ID	0.21811	0.95243	1.05
ARD – Size	0.45586	0.79219	1.2623
APD – ID	0.11636	0.98646	1.0137
APD – Size	-0.19182	0.9632	1.0382
ID – Size	-0.0992	0.99016	1.0099

The table above shows that none of the variables have a Tolerance value below 0.10 and none have a VIF value above 10.00. Based on these results, it can be concluded that there is no multicollinearity among the independent variables in the sample of manufacturing companies in the plastic and packaging sub-sector.

Heteroscedasticity Test

The purpose of the heteroscedasticity test is to determine whether the variance of the residuals is constant across observations in the regression model. One way to detect heteroscedasticity is by examining the scatterplot pattern. The scatterplot result using processed data from SPSS is presented as follows:

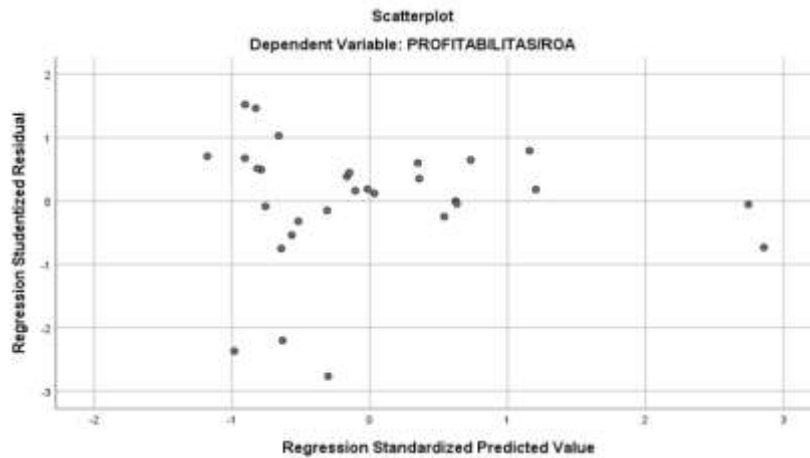


Figure 5. Scatterplot

Based on the scatterplot analysis, it is evident that there is no discernible pattern, as the points are randomly dispersed both above and below the Y-axis at the zero line. This indicates that the data does not exhibit symptoms of heteroskedasticity.

Autocorrelation Test

The autocorrelation test aims to determine whether there is a correlation between the error terms of one observation and another. A good regression model should be free from autocorrelation. If autocorrelation is present, the resulting regression coefficients become inefficient, leading to higher standard errors and unstable estimates. This test ensures that the regression model used in the analysis meets the classical assumption of independent residuals.

Table 4. Autocorrelation Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.516	0.266	0.181	0.032	2.1704

a. Predictors: (Constant), Inventory Days, AP Days, AR Days

b. Dependent Variable: Profitability / ROA

Based on the table above, the Durbin-Watson (DWstat) result is 2.1704. Referring to the Durbin-Watson table at a 5% significance level, with three independent variables ($k = 3$) and thirty observations ($n = 30$), the lower bound (dL) is 1.2138 and the upper bound (dU) is 1.6498. Since the DW value falls within the range $2 < DW < 4 - dU$ ($2 < 2.1704 < 2.3502$), it indicates that there is no positive or negative autocorrelation in the regression model.

Hypothesis Testing

Hypothesis testing is conducted to examine the effect of each independent variable on the dependent variable using the t-test. To determine the joint effect of the independent variables on the dependent variable, the F-test is used. Meanwhile, the coefficient of determination (R^2) is calculated to assess the contribution of the independent variables in explaining the variation of the dependent variable.

Multiple Linear Regression Analysis

Multiple linear regression analysis is used to examine the relationship between two or more independent variables and one dependent variable. The purpose of this analysis is to

measure the strength and direction of the relationship among variables. This test aims to determine whether AR Days, AP Days, and Inventory Days simultaneously influence Profitability (ROA).

Table 5. Coefficients

Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
(Constant)	0.001	0.025	—	0.025	0.98
AR DAYS	8.39E-05	0	0.06	0.351	0.728
AP DAYS	-0.001	0	-0.275	-1.628	0.115
INVENTORY DAYS	0	0	0.451	2.601	0.015

a. *Dependent Variable: Profitability/RoA*

Based on the regression output table, the regression equation is as follows:

$$Y = 0.001 + 8.388X_1 - 0.001X_2 + 0.000X_3, \text{ Where:}$$

Y = Profitability (ROA)

X₁ = AR Days

X₂ = AP Days

X₃ = Inventory Days

Interpretation:

- The constant coefficient of 0.001 indicates that if AR Days, AP Days, and Inventory Days are zero, the ROA is 0.001.
- The AR Days coefficient of 8.388 suggests that an increase of one unit in AR Days will increase ROA by 8.388, assuming other variables are constant.
- The AP Days coefficient of -0.001 means that a one-unit increase in AP Days will reduce ROA by 0.001, holding other variables constant.
- The Inventory Days coefficient of 0.000 shows a negligible positive effect on ROA per one-unit increase, assuming other variables remain unchanged.

t-Test Results

The t-test is used to determine the individual significance of each independent variable on the dependent variable.

Table 6. Coefficients Table

Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1					
(Constant)	0.001	0.025	—	0.025	0.98
AR Days	8.39E-05	0	0.06	0.351	0.728
AP Days	-0.001	0	-0.275	-1.628	0.115
Inventory Days	0	0	0.451	2.601	0.015

Influence of AR Days on ROA

Based on Table 6, the significance value for AR Days (X1) is 0.728, which is greater than 0.05, and the t-value (0.351) is lower than the t-table value (2.048). This indicates that the null hypothesis (H0) is accepted, and the alternative hypothesis (Ha) is rejected. Therefore, AR Days has no significant effect on ROA.

Influence of AP Days on ROA

The t-test result for AP Days shows a t-value of -1.628, which is less than the t-table value (2.048), and the significance value is 0.115, which is greater than 0.05. This means H0 is accepted and Ha is rejected, indicating that AP Days does not significantly affect ROA.

Influence of Inventory Days on ROA

For the Inventory Days variable, the t-value is 2.601, greater than the t-table value of 2.048, with a significance value of 0.015, which is less than 0.05. Thus, Ha is accepted and H0 is rejected, indicating that Inventory Days has a significant effect on ROA.

F-Test Results

To assess whether AR Days, AP Days, and Inventory Days simultaneously influence profitability (ROA), the F-test is used.

Table 7. ANOVA Test Results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	0.01	3	0.003	3.142	0.042
Residual	0.027	26			
Total	0.037	29	0.001		

- Dependent Variable: PROFITABILITY/ROA
- Predictors: (Constant), INVENTORY DAYS, AP DAYS, AR DAYS

Based on the ANOVA table above, the F-test result shows an F-value of 3.142 with a significance level of 0.042. Referring to the F-table with a numerator degree of freedom ($n-k-1 = 30-3-1$), the critical value is 2.98. Since the F-calculated is greater than the F-table value ($3.142 > 2.98$) and the significance value is less than 0.05 ($0.042 < 0.05$), it indicates that the null hypothesis (H0) is rejected and the alternative hypothesis (Ha) is accepted. This means that AR Days, AP Days, and Inventory Days simultaneously have a significant effect on profitability (ROA).

Correlation Coefficient Test Result

The correlation analysis aims to determine the strength of the relationship between two variables. From Table 7 the correlation coefficient (R) is 0.516, indicating a moderate correlation between the variables.

Coefficient of Determination Test Result

The coefficient of determination (R^2) in the regression equation, as shown in Table 12, is 0.266. This means that 26.6% of the variation in profitability (ROA) can be explained by the independent variables (AR Days, AP Days, and Inventory Days), while the remaining 73.4% is explained by other factors not included in the model.

Table 8. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.516	0.266	0.181	0.032

- Predictors: (Constant), Inventory Days, AP Days, AR Days

b. Dependent Variable: Profitability/RoA

The R-Square value in this study is 0.266, which indicates that 26.6% of the variation in the dependent variable (profitability/ROA) can be explained by the independent variables (AR Days, AP Days, and Inventory Days). Meanwhile, the remaining 73.4% is attributed to other factors not included in the model.

The Effect of AR Days on Profitability (ROA)

Based on the t-test results, AR Days does not have a significant or negative effect on profitability (ROA) in manufacturing companies within the plastic and packaging sub-sector during the 2016–2020 period. The calculated t-value is smaller than the critical t-table value, and the significance value is greater than 0.05. These findings are consistent with studies by Eforis & Pioletta (2020) and Nurjanah & Hakim (2018). Although shorter AR Days imply quicker cash inflows, increased operating expenses outpaced sales growth, reducing profitability. Furthermore, consistent losses from PT Berlina Tbk negatively influenced the aggregate ROA, skewing the results.

The Effect of AP Days on Profitability (ROA)

The t-test results also indicate that AP Days has no significant impact on ROA. This supports the findings of Yunos et al. (2018), which suggest that a shorter payment period may signal financial health and access to early payment discounts. However, the increased inventory resulting from frequent purchases does not lead to proportional sales increases, causing a mismatch between revenue and total assets, ultimately reducing profitability.

The Effect of Inventory Days on Profitability (ROA)

Inventory Days has a positive and significant effect on ROA. This aligns with studies by Wijaya & Tjun (2017) and Awad & Jayyar (2013). A higher inventory turnover rate indicates more efficient operations. Conversely, longer inventory periods may reflect overstocking or slow-moving goods, leading to high storage costs and reduced profitability. Therefore, lower Inventory Days suggest better efficiency and profit potential.

The Combined Effect of AR Days, AP Days, and Inventory Days on ROA

The F-test result shows a significant combined effect of the three independent variables on ROA. The calculated F-value exceeds the critical F-table value, and the significance level is below 0.05. The coefficient of determination (R^2) is 0.266, meaning that 26.6% of the variation in profitability is explained by the three variables, while the remaining 73.4% is influenced by other factors not included in the model.

CONCLUSION

This study aims to investigate the effect of working capital components, namely account receivable days, account payable days, and inventory days, on the profitability of manufacturing companies in the plastic and packaging sub-sector listed on the Indonesia Stock Exchange. Profitability is measured using return on assets, which reflects the efficiency of asset utilization in generating income. The findings reveal that account receivable days do not show a significant influence on profitability, suggesting that the speed of receivables collection may not be a dominant factor affecting returns in this sector. Meanwhile, account payable days demonstrate a positive relationship, implying that delaying payments to suppliers may provide liquidity advantages that enhance profitability. However, inventory

days exhibit a negative association, indicating that longer inventory turnover periods can reduce profit margins due to increased storage costs and inventory obsolescence risks. Overall, the simultaneous analysis of these variables provides insight into how effective working capital management strategies contribute to corporate financial performance. The study contributes to the body of knowledge by offering empirical evidence from a developing market context. It also highlights the need for financial managers to optimize each component of working capital to maintain competitive advantage and financial sustainability in a dynamic business environment.

REFERENCE

- Alipour, M. (2011). Working capital management and corporate profitability: Evidence from Iran. *World Applied Sciences Journal*, 12(7), 1093–1099.
- Bana Abuyazed. (2012). Working capital management and firm's performance in emerging markets: The case of Jordan. *International Journal of Managerial Finance*, 8(2), 155–179.
- Brigham, E. F., & Houston, J. F. (2010). *Fundamentals of Financial Management* (11th ed.). Mason, OH: South-Western Cengage Learning.
- Edison Hamid. (2020). Analisis perputaran persediaan terhadap profitabilitas pada PT Gudang Garam Tbk yang terdaftar di Bursa Efek Indonesia. *Jurnal Ilmiah Akuntansi dan Finansial*, 9(1), 56–64.
- Fitriani, D., & Utami, W. (2023). Working capital management and firm performance: Evidence from Indonesia. *Journal of Accounting and Business Research*, 12(1), 25–39.
- Jumingan. (2006). *Analisis Laporan Keuangan*. Jakarta: PT Bumi Aksara.
- Kasmir. (2016). *Analisis Laporan Keuangan* (11th ed.). Jakarta: RajaGrafindo Persada.
- Kumar, R., & Aisyah, N. (2022). Efficiency of working capital and its impact on firm's profitability: A study on ASEAN manufacturing companies. *Asian Economic and Financial Review*, 12(3), 45–60.
- Lestari, M., & Wicaksono, T. (2023). Does delaying payment to suppliers increase profits? Evidence from Indonesia's listed manufacturers. *Indonesian Journal of Accounting and Finance*, 14(1), 88–103.
- Mahmudah, S., & Oktavia, N. (2024). Working capital practices and return on assets in Indonesian consumer goods industry. *Journal of Business Strategy and Execution*, 9(1), 59–72.
- Munawir, S. (2010). *Analisis Laporan Keuangan*. Yogyakarta: Liberty.
- Nugroho, D. A., & Harahap, R. (2023). Profitability determinants in Indonesian manufacturing firms: A focus on asset and capital efficiency. *Jurnal Keuangan dan Bisnis*, 21(2), 123–138.
- Rahman, M. T., & Yuliani, D. (2022). The effect of inventory turnover and receivables collection on firm profitability. *Journal of Applied Business and Economics*, 24(1), 67–79.
- Riyanto, B. (2013). *Dasar-Dasar Pembelanjaan Perusahaan* (4th ed.). Yogyakarta: BPFE.
- Soedjatmiko, Y. (2015). Analisis pengaruh days sales outstanding (DSO), days inventory outstanding (DIO), dan days payable outstanding (DPO) terhadap current ratio (CR) perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia. *Jurnal Ekonomi dan Bisnis*, 7(2), 89–101.

- Tamba, J. R., & Halim, A. (2023). Inventory management, liquidity, and financial performance in volatile markets. *Journal of Emerging Market Finance*, 18(3), 202–218.
- Tauringana, V., & Afrifa, G. A. (2013). The relative importance of working capital management and its components to SMEs' profitability. *Journal of Small Business and Enterprise Development*, 20(3), 453–469.
- Wijaya, S., & Prasetyo, A. (2022). The mediating role of liquidity in the relationship between working capital management and profitability. *International Journal of Finance & Banking Studies*, 11(2), 89–101.