

THE IMPACT OF WORKING CAPITAL MANAGEMENT AND COVID-19 ON THE PROFITABILITY OF COMPANIES IN INDONESIA

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ABSTRACT

This research examines the impact of working capital management and the COVID-19 pandemic on the profitability of Indonesian companies listed on the Indonesia Stock Exchange from 2013 to 2022, excluding financial firms. Using panel regression with a fixed effects model, the findings reveal that cash conversion cycle management and firm size significantly influence profitability, both in terms of ROA and ROE. Efficient cash conversion cycle management enhances profitability by reducing the time needed to convert inventory investments into cash, while larger firms benefit from economies of scale and greater market access. Additionally, accounts receivable management, current ratio, and leverage significantly affect ROA, whereas inventory management, current assets, and the COVID-19 pandemic show no significant impact. For ROE, only cash conversion cycle and firm size have a significant influence. These results highlight the importance of effective working capital management strategies to enhance corporate profitability.

Keywords: Working Capital Management; Profitability; COVID-19

INTRODUCTION

In today's increasingly complex and dynamic business landscape, managing working capital and ensuring corporate profitability have become critical concerns that demand careful attention from decision-makers. Effective working capital management is essential in corporate finance, as it focuses on optimizing short-term assets and liabilities. This involves strategic management of inventory, receivables, and payables to ensure optimal liquidity and operational efficiency. Corporate profitability, conversely, is a fundamental metric used to assess a company's financial performance, reflecting its capacity to generate profits from its operational activities.

Given the continually evolving global economy, the challenges associated with managing working capital and maintaining profitability have become more intricate, particularly in light of fluctuating economic and industrial conditions. Effective management of working capital is instrumental in maximizing asset utilization and optimizing liquidity, thereby potentially enhancing profitability. Although working capital management is vital, its effect on corporate profitability, particularly amid shifting economic and industrial conditions, remains an area that requires further scholarly exploration.

Prior research, including studies by Supriyadi (2023), Sany et al. (2023), and Satoto et al. (2022), has highlighted the intricate connection between working capital management and corporate profitability. Nevertheless, there remains ongoing debate and uncertainty regarding the degree of this relationship and the factors influencing it. In response to these research gaps, this study aims to explore the relationship between working capital management and corporate profitability, providing insights into the key factors that influence this relationship.

The COVID-19 pandemic has severely disrupted the financial stability of businesses globally. The imposition of restrictions to curb the spread of the virus has led to significant supply chain disruptions, threatening the viability of both large and small enterprises worldwide (Olowookere et al., 2022). The increasing financial strain brought about by COVID-19 has drawn the attention of accountants, economists, financial experts, and academics worldwide. This unprecedented financial exclusion has compelled managers to devise strategies to mitigate the financial impact of COVID-19, with working capital management emerging as a key strategy. The effective management of working capital is a critical indicator of a company's ability to weather financial crises, influencing its current assets, short-term liabilities, revenue growth, and operating cost management (Zimon & Dankiewicz, 2020; Olowookere et al., 2022). It involves the strategic planning and management of current assets and liabilities to minimize the risk of failing to fulfill short-term obligations while preventing excessive investment in these assets.

Between 2012 and 2022, companies listed on the Indonesia Stock Exchange (IDX) faced a complex array of economic, industrial, and external factors that impacted their working capital management and profitability. In terms of economic growth, Indonesia experienced fluctuating GDP (Gross Domestic Product) growth rates during this period. Based on data from the Central Statistics Agency (BPS), Indonesia's economic growth reached its highest point at 6.2% in 2012, but subsequently decelerated to around 5% in the following years, before plummeting to 4.5% in 2020 due to the COVID-19 pandemic. Economic recovery began thereafter, with growth reaching 5.07% in 2021 and projected to rise to 5.4% in 2022 (Badan Pusat Statistik, 2022).

This research contributes to the existing literature by providing a detailed analysis of the transformative impact of the COVID-19 pandemic on corporate working capital management and its direct implications for corporate profitability, offering practical implications for

financial decision-makers and practitioners seeking to navigate complex external environments.

Driven by this insight, the researcher embarks on a study titled “The impact of working capital management and COVID-19 on the profitability of companies in Indonesia” which explores the financial performance of companies listed on the IDX between 2013 and 2022, shedding light on the interplay between working capital management, COVID-19, and corporate profitability. Based on the background, the research questions are formulated as follows:

1. Does inventory management affect a company's profitability?
2. Does accounts receivable affect a company's profitability?
3. Does accounts payable affect a company's profitability?
4. Does the cash conversion cycle affect a company's profitability?
5. Does the COVID-19 pandemic affect a company's profitability?

LITERATURE REVIEW

Working Capital Management

Effective working capital management encompasses the management of inventory, accounts payable, accounts receivable, and the cash conversion cycle (Aminu & Zainudin, 2015). Effective working capital management includes overseeing inventory, accounts payable, accounts receivable, and the cash conversion cycle. Various studies have identified key factors influencing the effectiveness of a company's working capital management.

Working capital management is influenced by several important factors, including liquidity, company size, credit policy, and payment policy. Liquidity denotes a company's capacity to fulfill its short-term obligations. Companies with good liquidity levels are generally better able to manage their working capital effectively, which positively impacts their profitability. Additionally, company size plays a significant role in working capital management. Larger companies typically have better access to resources and can obtain more favorable credit terms from suppliers. Research by Aktas et al. (2018) suggests that larger companies are more efficient in managing their working capital, which, in turn, enhances company value.

The credit policies implemented by a company also have a significant impact on accounts receivable and the cash conversion cycle. Companies with strict credit policies tend to have lower accounts receivable, ultimately increasing liquidity and profitability. Aminu & Zainudin (2015) assert that a good credit policy is crucial for effectively managing accounts receivable. Furthermore, the payment policy relates to how a company manages its payable accounts and short-term liabilities. Companies that can take advantage of early payment discounts can reduce costs and increase profitability. These factors collectively play a vital role in determining the effectiveness of working capital management within a company.

Amponsah-Kwatiah & Asiamah (2020) argues that, working capital measurement comprises multiple key elements, among which inventory management plays a vital role in evaluating the company's inventory management efficiency. Accounts receivable help in understanding how quickly the company can collect its receivables. Accounts payable reflect the speed at which a company settles its obligations to suppliers. The cash conversion cycle quantifies the duration needed to transform investments in inventory and receivables into cash. This cycle helps assess the operational efficiency of the company in managing its working capital. The current ratio is a key metric that evaluates the relationship between current assets and current liabilities. It plays a crucial role in assessing a company's liquidity and its capacity

to fulfill short-term obligations. Additionally, current assets are measured as the ratio of current assets to total assets, reflecting the proportion of current assets in relation to the company's overall assets. Firm size is calculated using the natural logarithm of total assets, offering a gauge of the company's operational capacity. Finally, leverage is measured by the ratio of long-term debt to assets, indicating the degree of debt utilization in the company's capital structure.

Inventory Management

Inventory management is the process of managing goods that are stored for sale or used in production. Excessive inventory can tie up capital that could otherwise be used for other investments, while insufficient inventory can lead to shortages of goods for sale or production. Research shows that effective inventory management is a critical prerequisite for a company's financial success, as it can reduce storage costs and prevent stockouts (Ghosh & Maji, 2004). Companies that manage their inventory efficiently tend to have higher profitability. Good inventory management allows companies to maintain optimal inventory levels, reduce storage costs, and improve liquidity. Efficiency in inventory management can also prevent loss of sales and customer dissatisfaction.

The inventory turnover ratio, which is computed by dividing COGS by average inventory, serves as a key performance indicator (KPI) for evaluating a company's inventory management. A higher ratio indicates efficient inventory management, with rapid inventory turnover, whereas a lower ratio may signal inventory management inefficiencies.

Studies have demonstrated that inventory turnover plays a crucial role in driving profitability, with effective inventory management exhibiting a strong positive relationship with Return on Assets (ROA) and Return on Equity (ROE). By improving efficiency in inventory management, companies can reduce storage costs and avoid stockouts that disrupt production and sales. This efficiency contributes to increased profitability and competitiveness in the market (Amponsah-Kwatiah & Asiamah, 2020).

Accounts Receivable

Accounts receivable represents the company's claims against customers arising from the sale of goods or services on credit. Effective receivables management involves setting appropriate credit policies, continuously monitoring receivables, and efficiently collecting payments. Aminu & Zainudin (2015), Aktas et al. (2018), and Deloof (2003) suggest that efficient receivables management can enhance company profitability by accelerating cash inflows and increasing company value. Their research indicates that companies with shorter collection periods tend to be more profitable.

Effective accounts receivable management is crucial for maintaining the company's liquidity and profitability. This process involves several key steps. First, setting an appropriate credit policy is the foundation of good receivables management, where the company must determine credit terms that align with the risk profile of its customers, including credit limits, payment terms, and payment conditions. Strict credit policies can help reduce the risk of default and increase company liquidity (Aminu & Zainudin, 2015). Next, continuous monitoring of receivables is essential to identify and address payment issues early. Companies should use monitoring systems that enable them to track the status of each receivable and identify overdue accounts. Companies that proactively manage their receivables can improve cash flow and company value (Aktas et al., 2018). Finally, effective receivables collection involves various strategies to ensure that customers pay on time, including sending payment reminders, offering discounts for early payment, and taking legal action if necessary. Companies with shorter

receivables collection periods tend to be more profitable, as this means less capital is tied up in unpaid receivables (Deloof, 2003).

Effective accounts receivable management is a key driver of profitability, with a significant positive impact on Return on Assets (ROA) and Return on Equity (ROE), as evidenced by research in the field. By managing accounts receivable efficiently, companies can accelerate cash inflows, reduce bad debts, and increase profitability (Amponsah-Kwatiah & Asiamah, 2020).

Accounts Payable

The company's accounts payable represent its credit-based liabilities to suppliers for goods or services acquired. Good accounts payable management includes setting efficient payment policies and continuously monitoring these obligations. Paying accounts payable on time allows companies to foster good relationships with suppliers and take advantage of early payment discounts, which can improve profitability (Azam, 2016). Effective accounts payable management can also help companies avoid liquidity issues that could disrupt day-to-day operations.

According to research by Ruhadi et al. (2024), effective accounts payable management are crucial for maintaining the company's liquidity and ensuring smooth operations. This process involves several important considerations, including the establishment of clear payment policies that outline payment terms with suppliers, such as payment deadlines, early payment incentives, and late payment penalties. These policies help companies take advantage of early payment discounts to reduce costs and increase profitability. Next, continuous monitoring of accounts payable is essential to ensure that obligations to suppliers are paid on time, helping to maintain good relationships with suppliers and avoid late payment penalties. Effective monitoring of accounts payable can help companies manage their cash flow better and improve liquidity. Finally, companies should negotiate with suppliers to obtain better credit terms, such as longer payment periods or discounts for early payment. Good negotiations with suppliers can provide greater financial flexibility for the company.

Regarding the impact of accounts payable management on profitability, effective accounts payable management has a significant positive impact on ROA and ROE. By efficiently managing accounts payable, companies can leverage trade credit as a source of short-term financing, reduce financing costs, and increase profitability (Amponsah-Kwatiah & Asiamah, 2020).

Cash Conversion Cycle

The Cash Conversion Cycle (CCC) measures the time it takes for a company to convert its investments in inventory and other assets into cash flow, providing valuable insights into its operational efficiency. This cycle includes the accounts receivable collection period, the inventory holding period, and the accounts payable payment period. According to Richards & Laughlin (1980), a shorter cash conversion cycle indicates better financial health for the company as it shows that the company can quickly convert its investments into cash. A study by Pais & Gama (2015) supports this, showing that a shorter cash conversion cycle is associated with higher profitability.

According to research by Safitri et al. (2022), the cash conversion cycle comprises three key components that significantly impact a company's liquidity and profitability management. Days Sales Outstanding (DSO) is a metric that quantifies the average time it takes for a company to collect payments from customers after completing a sale. Reducing this period enhances liquidity and profitability. The inventory holding period (Days Inventory

Outstanding) calculates the average time taken for a company to sell its inventory. Efficient management reduces storage costs and optimizes cash flow. The accounts payable payment period (Days Payable Outstanding) measures the average time taken for a company to pay suppliers. Companies can improve liquidity by extending this period without damaging supplier relationships, utilizing trade credit as short-term financing.

Regarding the impact of the cash conversion cycle on profitability, CCC has a significant positive impact on ROA and ROE. Effectively managing CCC can accelerate cash inflows, reduce working capital requirements, and increase company profitability (Amponsah-Kwatiah & Asiamah, 2020).

Current Ratio

Sany et al. (2023) The current ratio stands out as a widely employed liquidity metric, calculated by dividing current assets by current liabilities, providing valuable insights into a company's capacity to meet its short-term obligations.

According to research by Aminu & Zainudin (2015), the current ratio is a key indicator of a company's liquidity and financial stability, providing insights into its ability to meet short-term obligations. A high current ratio suggests that the company has ample current assets to offset its current liabilities, reflecting strong liquidity and a reduced risk of financial difficulties.

Regarding the impact of the current ratio on profitability, the current ratio has a significant positive impact on ROA and ROE. A higher current ratio indicates better liquidity, which can enhance a company's financial stability and profitability (Amponsah-Kwatiah & Asiamah, 2020).

Current Assets

Current assets, comprising cash, accounts receivable, inventory, and marketable securities, are readily convertible into cash within a short period, typically one year or less. These assets serve as a key indicator of a company's liquidity, providing valuable insights into its ability to meet short-term obligations. Research by Amponsah-Kwatiah & Asiamah (2020) shows that current assets have a positive and significant impact on the company's profitability, measured by Return on Assets (ROA) dan Return on Equity (ROE). Financial management theory supports the importance of current assets in maintaining financial stability. According to Brigham & Houston (2019), effective management of current assets allows companies to optimize cash use, expedite receivables, and minimize inventory holding costs. Adequate current assets provide flexibility in responding to market changes and managing financial emergencies, facilitating better financial planning and reducing reliance on costly external financing.

Firm Size

Firm size is commonly measured by total assets or annual revenue. Research by Amponsah-Kwatiah & Asiamah (2020) shows that firm size has a positive and significant effect on profitability. Larger companies typically have better access to financial and non-financial resources, which can enhance operational efficiency and competitiveness. Additionally, large firms can benefit from economies of scale, reducing per-unit costs through mass production and bulk purchasing of raw materials. Economies of scale theory supports these findings, indicating that larger firms achieve greater production and distribution efficiency. Baumol et al. (2020) argue that economies of scale enable large firms to spread fixed costs over a greater number of units, reducing average costs and increasing profit

margins. Larger firms also possess greater bargaining power with suppliers and creditors, leading to more favorable payment terms and lower financing costs, contributing to improved ROA and ROE compared to smaller firms.

Leverage

Leverage involves using borrowed funds to finance company assets, typically measured by the debt-to-equity ratio or debt-to-asset ratio. Research by Safitri et al. (2022) pecking order theory suggests that firms prefer to fund investments with internal sources (retained earnings) first, then with debt, and finally with new equity issuance due to higher information costs associated with issuing new shares. Leverage impacts Return on Equity (ROE) because borrowing can enhance equity returns if the company generates higher returns than the cost of debt. However, excessive leverage can threaten financial stability if earnings are insufficient to cover increased debt costs. Ruhadi et al. (2024) emphasizes the importance of leverage in financial performance analysis, noting that while leverage can boost ROE, it must be managed carefully to avoid financial instability.

COVID-19 Pandemic

The COVID-19 pandemic has significantly impacted profitability across various sectors in Indonesia, both positively and negatively, depending on the sector and the company's adaptive strategies. Many sectors experienced severe declines in profitability due to social restrictions and changes in consumer behavior (Pratama et al., 2021), which reported significant declines in the retail sector's financial performance. The aviation sector also faced sharp declines due to travel restrictions and reduced passenger numbers (Hidayat, 2021). Some companies, however, improved their profitability through innovation and rapid adaptation to new conditions. For instance, Esomar & Chritianty (2021) found that service sectors transitioning to digitalization and e-commerce managed to maintain or even enhance profitability during the pandemic. Dewi (2021) observed significant changes in financial ratios in the advertising and media sectors, reflecting adaptations to pandemic challenges. Overall, while the pandemic adversely affected profitability in many sectors, innovative and adaptable companies could navigate the crisis more effectively.

Profitability

Profitability measures the efficiency and effectiveness of management by the extent of profits relative to sales and investments. Basyith & Fitriya (2023) state that profitability reflects how effectively a company uses its assets to generate profits and how well it provides returns to shareholders. Effective working capital management, including cash conversion cycle and working capital investment strategies, positively influences ROA and ROE. Ruhadi et al. (2024) demonstrate that good working capital management enhances profitability and efficiency in asset and capital management, leading to higher returns for shareholders. Basyith & Fitriya (2023), Safitri et al. (2022), and Ruhadi et al. (2024) use ROA and ROE as profitability indicators, offering a comprehensive view of financial performance. ROA measures the efficiency of asset use in generating profits, while ROE reflects returns on shareholder equity. Effective working capital management contributes to improved ROA and ROE by reducing costs and increasing operational profits.

RESEARCH METHOD

Data

The study focuses on all companies listed on the Indonesia Stock Exchange (IDX), excluding financial institutions due to their unique accounting practices, totalling 413 companies. Data from S&P Capital IQ covering 2013–2022 resulted in a sample of 4,130 observations, deemed representative for financial performance analysis.

Independent variables include working capital management (inventory, accounts receivable, accounts payable, cash conversion cycle) and the COVID-19 pandemic (dummy variable for 2019–2022). Dependent variables are profitability measures, Return on Assets (ROA) and Return on Equity (ROE). Two static panel models, fixed effects and random effects, are used to assess the impact of these variables over time.

Fixed Effects Model

This model is used to control for company-specific effects that are unobservable and constant over the study period. It allows the researcher to identify and measure the impact of independent variables on the dependent variables by eliminating inter-company variability. The formula for the fixed effects model is as follows:

$$ROA_{it} = \alpha_i + \beta_0 + \beta_1 IM_{it} + \beta_2 ACCR_{it} + \beta_3 ACCP_{it} + \beta_4 CCC_{it} + \beta_5 COV_{it} + \beta_6 CR_{it} + \beta_7 CAT_{it} + \beta_8 FSIZE_{it} + \beta_9 LEV_{it} + \varepsilon_{it}$$

$$ROE_{it} = \alpha_i + \beta_0 + \beta_1 IM_{it} + \beta_2 ACCR_{it} + \beta_3 ACCP_{it} + \beta_4 CCC_{it} + \beta_5 COV_{it} + \beta_6 CR_{it} + \beta_7 CAT_{it} + \beta_8 FSIZE_{it} + \beta_9 LEV_{it} + \varepsilon_{it}$$

Where:

- ROA_{it} is Return on Assets
- ROE_{it} is Return on Assets
- α_i = Company-specific fixed effect
- β_0 = Constant
- β_1 to β_8 = Regression coefficients for independent variables
- IM = Inventory management
- $ACCR$ = Accounts receivable
- $ACCP$ = Accounts payable
- CCC = Cash conversion cycle
- $COVID$ = COVID19
- CR = Current ratio
- CAT = Current assets to total assets ratio
- $FSIZE$ = Firm size
- LEV = Firm size
- ε_{it} = Residual error

Random Effects Model

The random effects model assumes that the differences among companies are random and not correlated with the independent variables. This model captures unobservable inter-company variability that might affect the research outcomes. The formula for the random effects model is as follows:

$$ROA_{it} = \beta_0 + \beta_1 IM_{it} + \beta_2 ACCR_{it} + \beta_3 ACCP_{it} + \beta_4 CCC_{it} + \beta_5 COV_{it} + \beta_6 CR_{it} + \beta_7 CAT_{it} + \beta_8 FSIZE_{it} + \beta_9 LEV_{it} + \mu_{it} + \varepsilon_{it}$$

$$ROE_{it} = \beta_0 + \beta_1 IM_{it} + \beta_2 ACCR_{it} + \beta_3 ACCP_{it} + \beta_4 CCC_{it} + \beta_5 COV_{it} + \beta_6 CR_{it} + \beta_7 CAT_{it} + \beta_8 FSIZE_{it} + \beta_9 LEV_{it} + \mu_{it} + \varepsilon_{it}$$

Where:

- μ_{it} = Company-specific random error
- Other variables are the same as in the fixed effects model.

RESULTS AND DISCUSSION

Descriptive Statistic

A summary of the descriptive statistics for each variable in this study is provided in the table below:

Table 1. Descriptive Statistic

Variable	Mean	Std. Dev.	Min	Max	Observ
ROA	2.41	5.57	-16.04	25.89	4,130
ROE	4.66	30.33	-122.33	167.77	4,130
IM	7086.19	43417.25	0	373600	4,130
ACCR	2741.55	14801.92	0	109978.8	4,130
ACCP	2409.92	12820.08	0	100763.3	4,130
CCC	141.98	435.2	-168.06	3193.04	4,130
CR	1.61	2.73	0	17.96	4,130
CAT	22.99	110.13	0	727	4,130
FSIZE	8.13	5.27	0	14.7	4,130
LEV	5.44	30.64	0	232.55	4,130
COVID	0.3	0.46	0	1	4,130

Hausman Test

The table below displays the results of Hausman Test in this study:

Table 2. Hausman Test

Variable Dependent	Chi-Square Statistic	Degrees of Freedom (df)	Prob > Chi2
ROA	28.85	6	0.0001
ROE	32.12	6	0.0000

Prob > Chi2 value is less than 0.05. Based on the results, the fixed-effects model is a better fit than the random-effects model. The fixed-effects model was chosen because it can control unobserved individual effects and provides more accurate and unbiased estimates. Thus, the use of the fixed-effects model in this research can provide deeper insight into the influence of independent variables on company profitability in Indonesia.

Chow Test

The table below displays the result of Chow Test in this study:

Table 3. Chow Test

Metric	ROA	ROE
Chi-squared	1926.2	577.38
P-value	0.0000	0.0000

The chow test results for ROA and ROE show highly significant outcomes, with chi-squared values of 1926.20 and 577.38, and p-values of 0.0000 for both. This indicates that the Fixed Effects (FE) model is more appropriate than the Ordinary Least Squares (OLS) model for analyzing ROA and ROE. The FE model provides more consistent and reliable estimates by addressing variability among companies in the panel data.

Diagnostic Test

The table below displays the results of diagnostic test in this study:

Table 4. Diagnostic Test

Diagnostic Test	ROA	ROE
Modified Wald Test for Heteroskedasticity	Chi-squared: 1.4e+06, p-value 0.0000	Chi-squared: 3.8e+07, p-value 0.0000
Wooldridge Autocorrelation Test	F-statistic: 99.918, p-value 0.0000	F-statistic: 4.098, p-value 0.0436
Pesaran's cross-sectional Dependence Test	Chi-squared: 25.744, p-value 0.0000	Chi-squared: 24.618, p-value 0.0000

The diagnostic tests for the regression models assessing ROA and ROE reveal significant issues. The modified wald test for heteroskedasticity shows chi-squared values of 1.4e+06 for ROA and 3.8e+07 for ROE, with p-values of 0.0000, indicating heteroskedasticity in both models. The Wooldridge autocorrelation test reports F-statistics of 99.918 for ROA and 4.098 for ROE, with p-values of 0.0000 and 0.0436, respectively, highlighting autocorrelation. Additionally, the Pesaran cross-sectional dependence test shows chi-squared values of 25.744 for ROA and 24.618 for ROE, with p-values of 0.0000, indicating cross-sectional dependence. These results suggest the need for model improvements or more robust estimation methods to address these issues.

Results of Regression Analysis with ROA

The table below displays the result of regression analysis with ROA:

Table 5. ROA Regression Result

Variable	Coefficient	Std. Error	t	p> t
IM	-565E-07	1.33E-06	-0.42	0.672
ACCR	1.60E-05	7.71E-06	2.08	0.039
ACCP	7.72E-06	3.96E-06	1.95	0.052
ACC	-0.0011007	0.0002175	-5.06	0.000
COVID	0.6291118	0.4597059	1.37	0.172
CR	0.1777833	0.0411667	4.32	0.000
CAT	0.0005576	0.0004831	1.15	0.249
FSIZE	1.06561	0.1793144	5.94	0.000
LEV	0.0035167	0.0014581	2.41	0.016

Inventory Management had a coefficient of -5.65E-07, t-value of -0.42, and a p-value of 0.672, indicating that it does not significantly impact ROA. Although the negative coefficient suggests a potential decrease in profitability with improved inventory management, the lack of significance means this relationship is not robust.

Accounts Receivables showed a coefficient of 1.60E-05, t-value of 2.08, and p-value of 0.039, indicating a significant positive impact on ROA. This suggests that better management of receivables can enhance profitability.

Accounts payables had a coefficient of 7.72E-06, t-value of 1.95, and p-value of 0.052, which is close to significance. This implies that efficient management of payables may improve profitability, though it is not statistically significant at the 5% level.

Cash conversion cycle had a coefficient of -0.0011007, t-value of -5.06, and p-value of 0.000, showing a highly significant negative impact on ROA. A shorter cash conversion cycle is associated with higher profitability, indicating improved liquidity and operational efficiency.

COVID-19 had a coefficient of 0.6291118, t-value of 1.37, and p-value of 0.172, suggesting no significant impact on ROA. The positive coefficient implies a theoretical increase in profitability during the pandemic, but this effect is not statistically significant.

Current ratio had a coefficient of 0.1777833, t-value of 4.32, and p-value of 0.000, demonstrating a significant positive impact on ROA. Higher liquidity, as measured by the current ratio, correlates with higher profitability.

Current Assets had a coefficient of 0.0005576, t-value of 1.15, and p-value of 0.249, indicating no significant impact on ROA. Although there is a positive relationship, it is not statistically significant.

Firm size had a coefficient of 1.06561, t-value of 5.94, and p-value of 0.000, showing a significant positive impact on ROA. Larger firms tend to have higher profitability due to factors like economies of scale and market power.

Leverage had a coefficient of 0.0035167, t-value of 2.41, and p-value of 0.016, indicating a significant positive impact on ROA. Higher leverage can enhance profitability, though it requires careful management to avoid financial risks.

Results of Regression Analysis with ROE

The table below displays the result of regression analysis with ROE:

Table 6. ROE Regression Results

Variable	Coefficient	Std. Error	t	p> t
IM	-1.26E-05	1.10E-05	-1.15	0.251
ACCR	-4.97E-05	2.59E-05	1.92	0.056
ACCP	-3.70E-05	4.43E-05	0.83	0.404
ACC	-0.0035107	0.0007609	-4.61	0
COVID	2.193823	0.651508	1.33	0.185
CR	0.2026592	0.1704472	1.19	0.235
CAT	-0.0043338	0.0042936	-1.01	0.313
FSIZE	4.650758	0.874417	2.48	0.013
LEV	0.0109683	0.0112919	0.97	0.332

Inventory Management had a coefficient of -1.26E-05, t-value of -1.15, and p-value of 0.251, indicating no significant impact on ROE. The negative coefficient suggests a possible decrease in ROE with improved inventory management, but this relationship is not statistically significant.

Accounts receivable had a coefficient of 4.97E-05, t-value of 1.92, and p-value of 0.056, suggesting a nearly significant positive impact on ROE. Improved management of receivables may enhance ROE, although it is not significant at the 5% level.

Accounts payables had a coefficient of 3.70E-05, t-value of 0.83, and p-value of 0.404, indicating no significant impact on ROE. Despite a positive coefficient, effective management of payables does not significantly affect ROE.

Cash conversion cycle had a coefficient of -0.0035107, t-value of -4.61, and p-value of 0.000, demonstrating a significant negative impact on ROE. A shorter cash conversion cycle is associated with higher ROE, reflecting better liquidity and profitability.

COVID-19 had a coefficient of 2.193823, t-value of 1.33, and p-value of 0.185, indicating no significant impact on ROE. Although there is a positive coefficient suggesting potential improvements in ROE during the pandemic, this effect is not statistically significant.

Current ratio had a coefficient of 0.2026592, t-value of 1.19, and p-value of 0.235, showing no significant impact on ROE. Higher liquidity does not significantly enhance ROE, despite a positive relationship.

Current assets had a coefficient of -0.0043338, t-value of -1.01, and p-value of 0.313, indicating no significant impact on ROE. The negative coefficient suggests a potential decrease in ROE with more current assets, but this is not significant.

Firm size had a coefficient of 4.650758, t-value of 2.48, and p-value of 0.013, showing a significant positive impact on ROE. Larger firms tend to have higher ROE due to advantages like scale and market dominance.

Leverage had a coefficient of 0.0109683, t-value of 0.97, and p-value of 0.332, indicating no significant impact on ROE. Although higher leverage could potentially improve ROE, the effect is not statistically significant.

CONCLUSION

This study finds that effective cash conversion cycle management and firm size are crucial determinants of corporate profitability in Indonesia, with significant effects on Return on Assets (ROA) and Return on Equity (ROE). Additionally, larger firms benefit from economies of scale, better resource access, and broader market reach, all of which contribute positively to profitability. Conversely, inventory management, accounts receivable, accounts payable, current ratio, current assets, leverage, and the impact of COVID-19 did not show significant effects on profitability in this model, suggesting that companies may need to explore different management strategies or further research.

Financial managers should strengthen receivables management by implementing effective credit policies and stringent monitoring to expedite cash flow and enhance liquidity. To improve cash flow, it is essential to streamline the cash conversion cycle by implementing more efficient inventory management practices and faster receivables collection processes. Companies should also maintain a healthy current asset ratio and adapt swiftly to external conditions, such as the COVID-19 pandemic, by adopting digital technologies and diversifying their business. Theoretically, this research contributes to the literature on working capital management and profitability during the COVID-19 pandemic, and future studies should explore the long-term effects of the pandemic and industry-specific comparisons. Alternative research methods, such as dynamic panel analysis, could offer additional insights into the relationships between working capital management, external conditions, and profitability, addressing the limitations of this study.

REFERENCES

- Aktas, N., Croci, E., & Petmezas, D. (2018). Is working capital management value-enhancing? Evidence from firm performance and investments. *Journal of Corporate Finance*, 30, 93–113. <http://dx.doi.org/10.1016/j.jcorpfin.2014.12.008>
- Aminu, Y., & Zainudin, N. (2015). A review of anatomy of working capital management theories and the relevant linkages to working capital components: A theoretical building

- approach. *European Journal of Business and Management*, 7(2), 10–18. <https://iiste.org/Journals/index.php/EJBM/article/view/19104>
- Amponsah-Kwatiah, K., & Asiamah, M. (2020). Working capital management and profitability of listed manufacturing firms in Ghana. *International Journal of Productivity and Performance Management*, 70(7), 1751–1771. <https://doi.org/10.1108/IJPPM-02-2020-0043>
- Azam, K. (2016). *Effect of cash conversion cycle, firm size and leverage on productivity: A sectoral analysis in Pakistan* [Unpublished Doctoral Dissertation]. Bahria University Islamabad Campus, Islamabad.
- Badan Pusat Statistik. (2022). *Statistik Indonesia*. Badan Pusat Statistik. <https://www.bps.go.id/>.
- Basyith, A., & Fitriya. (2023). The effect of COVID-19 on working capital strategy and profitability. *International Journal of Social Science and Business*, 7(3), 520–527. <https://doi.org/10.23887/ijssb.v7i3.45904>
- Baumol, W. J., Blinder, A. S., & Solow, J. L. (2020). *Economics: Principles and policy* (14th ed.). Cengage Learning.
- Brigham., & Houston. (2019). *Fundamentals of financial management* (15th ed.). Cengage Learning.
- Deloof, M. (2003). Does working capital management affect profitability of Belgian firms?. *Journal of Business Finance and Accounting*, 30(4), 573–588. <http://dx.doi.org/10.1111/1468-5957.00008>
- Dewi, S. A. N. (2021). *Analisis komparasi kinerja keuangan sebelum dan selama pandemi COVID-19 pada perusahaan sub sektor periklanan dan media yang terdaftar di BEI* [Skripsi, Sekolah Tinggi Ilmu Ekonomi Indonesia]. <http://repository.stei.ac.id/6552/>
- Esomar, M. J. F., & Chritianty, R. (2021). Dampak pandemi COVID-19 terhadap kinerja keuangan perusahaan sektor jasa di BEI. *Jurnal Konsep Bisnis dan Manajemen*, 7(2), 227–233. <https://doi.org/10.31289/jkbm.v7i2.5266>
- Ghosh, S. K., & Maji, S. G. (2004). Working capital management efficiency: A study on the Indian cement industry. *Management Accountant*, 39(5), 363–372.
- Hidayat, M. (2021). Analisis perbandingan kinerja keuangan dan nilai perusahaan sebelum dan disaat pandemi COVID-19. *Measurement Jurnal Akuntansi*, 15(1), 9–17. <https://doi.org/10.33373/mja.v15i1.3332>
- Olowookere, J. K., Odetayo, T. A., Adeyemi, A. Z., & Oyedele, O. (2022). Impact of COVID-19 on working capital management: A theoretical approach. *Jurnal Bisnis dan Kewirausahaan (Journal of Business and Entrepreneurship)*, 10(1), 38–47. <https://doi.org/10.46273/job.v10i1.224>
- Pais, M. A., & Gama, P. M. (2015). Working capital management and SMEs profitability: Portuguese evidence. *International Journal of Managerial Finance*, 11(3), 341–358. <https://doi.org/10.1108/IJMF-11-2014-0170>

- Pratama, E. H., Pontoh, W., & Pinatik, S. (2021). Analisis dampak COVID-19 terhadap kinerja keuangan perusahaan ritel yang terdaftar di bursa efek Indonesia. *Jurnal Riset Akuntansi*, 16(2), 111–118. <https://doi.org/10.32400/gc.16.2.35921.2021>
- Richards, V. D., & Laughlin, E. J. (1980). A cash conversion cycle approach to liquidity analysis. *Financial Management*, 9(1), 32–38. <https://www.jstor.org/stable/3665310?seq=1>
- Ruhadi, R., Mai, M. U., & Sudradjat, S. (2024). Working capital and financial performance of Indonesian manufacturing companies: Before and during COVID-19. *International Journal of Applied Business Research*, 6(1), 66–80. <https://doi.org/10.35313/ijabr.v6i01.338>
- Safitri, E., Seftiani, D., & Basyith, A. (2022). Working capital strategy on profitability before and during the COVID-19 pandemic in the Indonesia Stock Exchange. *International Journal of Multidisciplinary Research and Analysis*, 5(5), 994–1002. <https://doi.org/10.47191/ijmra/v5-i5-16>
- Sany., Winata, A., & Yasin, T. V. (2023). Working capital management and leverage to profitability: Case of manufacturing firms in Indonesia. *International Journal of Organizational Behavior and Policy (IJOBP)*, 2(1), 55–66. <http://dx.doi.org/10.9744/ijobp.2.1.55-66>
- Satoto, S. H., KP, H. N., & WS, S. B. (2022). Working capital management before and during the COVID-19 pandemic and their effect on profitability in manufacturing companies listed on the Indonesia Stock Exchange. *International Journal of Economics, Business and Accounting Research*, 6(3), 2119–2126. <https://doi.org/10.29040/ijebar.v6i3.6493>
- Supriyadi, D. (2023). The effect of working capital management on the profitability of small and medium enterprises: Meta-analysis. *Journal of Business and Management Inaba*, 2(1), 9–28. <https://doi.org/10.56956/jbmi.v2i01.201>
- Zimon, G., & Dankiewicz, R. (2020). Trade credit management strategies in SMEs and the COVID-19 pandemic—A case of Poland. *Sustainability*, 12(15), 2–16. <https://doi.org/10.3390/su12156114>