The Effect of Working Capital Turnover and Cash Turnover on Profitability Before and During the COVID-19 Pandemic in Health Sector Companies Listed on the Indonesian Stock Exchange

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ARTICLE HISTORY

Received: 20 August 2023
Revised: 11 July 2025
Accepted: 11 July 2025

Keywords: Working Capital Turnover, Cash Turnover Profitability.

A B S T R A C T

The COVID-19 pandemic has increased demand in the health sector. This study aims to determine and analyze the differences in working capital turnover, cash turnover, and profitability and analyze whether there is an effect of turnover of working capital and turnover of cash on the profitability between before and during the COVID-19 pandemic in health sector companies listed on the Indonesia Stock Exchange. A total of 17 companies were used as research samples using purposive sampling method. To analyze the data using t-test and multiple linear regression. In health sector companies listed on the Indonesia Stock Exchange, this study shows no difference in working capital turnover, cash turnover, or profitability between before and during the COVID-19 pandemic. Working capital turnover and cash turnover have a negative effect on profitability before and during the COVID-19 pandemic.

1. Introduction

The world was shocked by the coronavirus outbreak that started in Wuhan, China, towards the end of 2019. Coronavirus Illness 2019 (often abbreviated as COVID-19) is a disease caused by coronavirus 2 (SARS-CoV-2) that damages the human respiratory tract. The World Health Organization (WHO) proclaimed COVID-19 a pandemic on March 11, 2020. The earliest case of COVID-19 in Indonesia was found on March 2, 2020. The COVID-19 pandemic caused various sectors to be affected and experience an economic downturn. Head of the Central Statistics Agency (BPS), Margo Yuwono, said that there are specific sectors that still show positive growth or can be said to benefit from this pandemic, including the health sector. The health sector experienced the most significant growth during the COVID-19 crisis. Compared to the growth rate of 8.69% in 2019 before the crisis, in 2020 it increased by 11.56% (Bisnis.com, 2022).

Growth in the healthcare sector indicates that demand indicators and company competitiveness are increasing. The company's growth rate can affect the ability to maintain the company in the future. According to Kusumawardani (2022), a good parameter to determine company growth is profit. The capacity to generate profits in a certain amount of time is the

primary determinant of the company's profitability. The level of profitability of the company indicates the extent to which the company has succeeded in generating profits from the revenue earned. The level of revenue and profit of the company is influenced by the sales made. The more sales, the greater the profit earned, thus the greater the potential to raise the company's profitability. Along with the increase in sales, the company will need funds to finance current assets. The funds released are often called working capital.

Working capital is the need for funds used to finance operational activities and long-term activities. The management of working capital turnover must be adequately considered in order to meet the needs of the company. Kasmir (2019) reveals that the turnover of working capital is intended to evaluate the performance of the company's working capital over time. Since cash is issued and invested in working capital elements that are converted back to money, it is known as the working capital period. If the working capital turnover period is used faster, the business will feel more efficient in its operational activities. Esra and Apriweni (2002) stated that effective working capital management focuses on three main components: cash, receivables, and inventory. Working capital can be categorized as efficient if each component rotates faster.

Cash is one of the components of working capital that has the highest level of liquidity. The ability to use cash immediately to fulfill the company's financial obligations makes it the most liquid form of assets. The liquidity level of the company will increase along with cash holdings. This means that the company is less likely to be unable to pay its debts. However, this does not mean that the company must have a large amount of cash, because it will generate a lot of idle time cash so that it has the potential not to generate income and reduce profitability (Kasmir, 2019). The speed of cash flow that has been invested in working capital is known as the cash turnover rate. With the cash turnover ratio, it is possible to see how often cash funds rotate over a while and reveal the company's success in controlling cash funds to create profits. The level of cash utilization will be more efficient when the cash turnover rate increases, so this can contribute to increased profitability.

This study is a replication of previous studies such as the research of Rinofah & Sari (2022), Eksandy & Dewi (2019), Rahayu et al (2021), which examined turnover of working capital, turnover of cash, and accounts receivable turnover. Sulastri (2022) examines the turnover of working capital, turnover of cash, and turnover of inventory. And Nainggolan et al (2020) examined the turnover of cash, the turnover of working capital, current ratio. However, the study obtained a diversity of conclusions and still did not refer to health sector companies. Comparative analysis of independent variables is also used in this study according to the problems regarding the COVID-19 pandemic previously described. The previous study's method of research analysis was multiple linear regression analysis, this study also used an independent sample t-test in addition to multiple linear regression analysis.

2. Theoretical Framework and Hypothesis

2.1 Agency Theory

In a legal arrangement known as an agency relationship, a third party (agent) is selected by one or more parties (principals) to perform a responsibility on their behalf and is given some decision-making authority (Jensen & Meckling, 2019). The agent and principal relationship occurs between managers and shareholders, according to agency theory. Managers should work to increase the profitability of the company to satisfy the interests of shareholders and managers. The link with this research is that management informs shareholders about working capital and cash turnover so that problems do not occur so and they can improve company performance together.

2.2 Resource-Based View Theory

According to Dekrita (2021), the Resources-Based View (RBV), developed by Jay Barney in 1991, examines the resources owned by the company and how the company can manage and utilize these resources. According to RBV, companies will succeed in business competition and achieve high financial performance by owning, controlling, and utilizing crucial strategic assets, including tangible and intangible assets, according to Weterfelt's explanation in 2007. The relationship between RBV and this research is that the company seeks to achieve profitability by managing and optimizing the working capital and cash owned by the company.

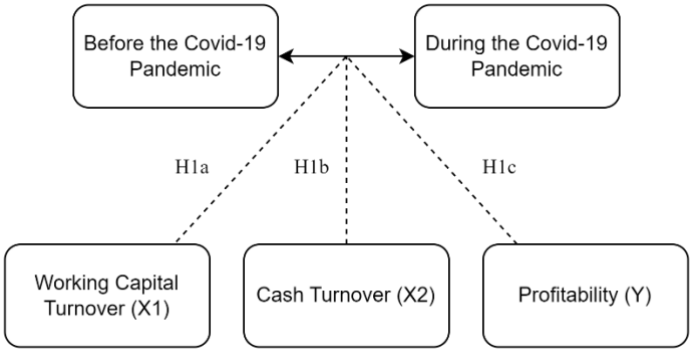

Figure 1. Differences in Working Capital Turnover, Cash Turnover, and Profitability between Before and During the COVID-19 Pandemic

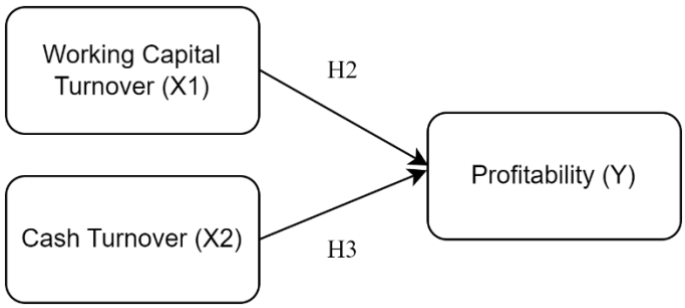

Figure 2. Effect of Working Capital Turnover and Cash Turnover on Profitability

2.3 Hyphotesis Development

Differences in Working Capital Turnover, Cash Turnover, and Profitability

During the COVID-19 pandemic, the healthcare sector is facing challenges with a huge increase in demand for healthcare services such as the treatment of COVID-19 patients, the need for medical devices, and vaccination programs. As a result, in order to meet this demand, the working capital required will increase. In assessing the efficiency of the use of working capital in business continuity, it can be seen by the circulation of working capital. Nurfitriani (2022) stated that the ratio of working capital turnover in companies in the pharmaceutical sector rose on average. As such, it can be said that the COVID-19 pandemic has had a favorable financial impact on the pharmaceutical industry, which is a health sector. The working capital period is calculated from the time liquid assets are invested in working capital instruments until they are returned to liquid assets. Hence, cash turnover has an impact on working capital. As demand continues to increase, sales also tend to grow. Companies with high working capital turnover show the effectiveness of working capital at generating sales, which in turn can increase profitability. As in Prasetya's research (2021), which shows an increase in financial performance in terms of profitability using ROA calculations before and during the COVID-19 pandemic.

H1a: There is a difference in working capital turnover between before and during the COVID-19 pandemic.

H1b: There is a difference in cash turnover between before and during the COVID-19 pandemic.

H1c: There is a difference in profitability between before and during the COVID-19 pandemic.

Effect of Working Capital Turnover on Profitability

Working capital turnover identifies the extent to which entities can utilize their working capital to generate sales and can be relied upon as an important financial performance indicator. Turnover of working capital has aspects of profitability, because the goal of optimal working capital management is in alignment with the company's goal to generate maximum profit. High working capital turnover can contribute to increased sales levels. The greater the company's net sales, the higher the potential profit generated, which basically leads to high profits for the company. When the profit earned increases, it will affect profitability, because profit is one of the elements in the calculation of profitability. This is consistent with the research findings of Rinofah & Sari (2022) that the effect of turnover of working capital against profitability is positive and significant. While the findings by Putri et al (2023a) showed a negative and significant working capital turnover on profitability.

H2: Working capital turnover has a positive effect on profitability.

Effect of Cash Turnover on Profitability

Cash turnover shows a measure of the company's efficiency in managing cash to generate income, and provides information about the frequency of money usage. The level of working capital cash flow is described by this turnover. The more cash turnover increases, indicating more efficient cash management in its business activities. Companies with a high level of cash turnover can optimize the use of their working capital to generate revenue quickly, so they have the potential to generate high profits as well. This is reinforced by the findings by Sulastri (2022) and Eksandy & Dewi (2019) that the turnover of cash positively impacts profitability. Meanwhile, by research by Rahayu et al (2021) and Natalia et al (2017), the turnover of cash had a negative effect on ROA.

H3: Cash turnover has a positive effect on profitability.

3. Research Methodology

Companies in the health sector that are registered on the Indonesia Stock Exchange (IDX) are the study's population. Purposive sampling is the sampling strategy that was utilized, and the criteria were as follows: a) companies in the health sector that were registered on the IDX in 2018–2021; b) health sector companies that published complete financial reports in 2018–2021. There were 17 businesses in the chosen sample. The company's financial statements are downloaded from the official IDX Website as part of the data collection process. Analysis of study data using the Statistical Package for Social Sciences (SPSS).

The independent variables in this study are working capital turnover and cash turnover. Working capital turnover is a ratio to evaluate the effectiveness of the entity's working capital at any time. This refers to the volume of working capital that rotates from start to finish (Kasmir, 2019).

$$WCT = \frac{Net\ Sales}{\text{Current assets} - \text{Current liabilities}}$$

While the ratio is used to estimate how much working capital is available to meet invoices and finance sales. Applied to assess the amount of cash available to cover liabilities and expenses related to sales is known as cash turnover (Kasmir, 2019)

$$CT = \frac{\text{Sales}}{\text{Average cash}}$$

Meanwhile, the dependent variable is profitability. The company's ability to achieve profit is measured by the profitability ratio. This ratio serves as a measure of the company's managerial efficiency (Kasmir, 2019)

$$ROA = \frac{\text{Net profit after tax}}{\text{Total assets}} \text{ x } 100\%$$

4. Results and Discussion

Descriptive Statistics

Based on Table 1 of the sample of 17 health sector companies shows the amount of data studied is as much as 68. Descriptive statistical results show that the variables working capital turnover, cash turnover, and profitability have the lowest value of -198.52, 2.64, and -23.79, respectively. At the same time, the highest values are 73.97, 214.70, and 92.10. The independent variable, working capital turnover, has a mean value of 2.3904 while the standard deviation is 27.53407. The standard deviation reflects a large difference, causing the data distribution to show unfavorable results. Similarly, the cash turnover variable obtained a mean value of 17.5076 and a standard deviation of 31.93273. This indicates unfavorable results because the average value is smaller than the standard deviation. The dependent variable, profitability, has a mean value of 8.3787 and a standard deviation of 13.16596. The mean results below the standard deviation indicate unfavorable results.

Difference Test

As an alternative to the t-test, the Wilcoxon test is applied in case the data is detected to be abnormal in the normality test (Santosa, 2016). The Wilcoxon test is part of a non-parametric statistical method used to measure comparisons by looking at the difference between two paired data (Sarwono, 2011). When the significance value is < 0.05, it can be concluded that there is a difference between the two datasets, while if > 0.05, then there is no difference. Judging from Table 2 that there is no significance difference in working capital turnover (WTC) between before and during the COVID-19 pandemic. Referring to Table 2, it is concluded that there is no significant difference between before and during the COVID-19 pandemic in cash turnover (CT). The results from Table 2 showed that a significant difference does not exist in profitability (ROA) before and during the COVID-19 pandemic.

Table 1
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Dev
WCT	68	-198.52	73.97	2.39	27.53
CT	68	2.64	214.70	17.50	31.93
Profitability	68	-23.79	92.10	8.37	13.16
Valid N (listwise)	68				

Source: Data Process, 2023

Table 2
Wilcoxon Test Results

	WCT_During - WCT_Before	CT During - CT Before	ROA_During - ROA_Before
Z	-0.313[b]	-1.239[b]	-1.752[b]
Asymp. Sig. (2-taild)	0.755	0.215	0.080

Source: Data Process, 2023

Multiple Linear Regression Analysis

Multiple linear regression analysis is used to determine how two or more variables are related to one another. Based on the results of multiple linear regression analysis in Table 3, the following equation is obtained:

$$Y = 3.331 - 0.543X1 - 0.371X2 + e$$

The explanation of the multiple linear regression equation is that the constant value (α) is 3.331. This shows that the dependent variable value, namely ROA, is equal to 3.331 if the working capital distribution and cash distribution variables are equal to zero. The working capital turnover variable (X1) has a negative coefficient regression of -0.543. This indicates the opposite direction between working capital turnover and ROA. ROA will decrease by -0.543 units for every one-unit increase in working capital turnover, assuming that the other independent variables in the regression model are constant. The cash turnover variable (X2) shows a negative regression coefficient of -0.371. This indicates that the relationship between cash turnover and ROA is unidirectional. Assuming that other independent variables are fixed, then for every one unit increase in cash turnover, ROA will decrease by -0.371 units.

Coefficient of Determination (R^2)

The degree to which the model can explain the dependent variables is indicated by the coefficient of determination (R2). If the value is close to 1, then the variance in the dependent variable can be explained almost entirely by the independent factors. Judging from Table 4, the adjusted coefficient of determination (Adjusted R Square) value is 0.307. Indicates the magnitude of the influence of working capital turnover variables (X1) and cash turnover (X2) on profitability (Y) by 30.70%. So that profitability as measured by ROA can be explained by working capital turnover and turnover of cash by 30.70% and the remaining 69.30% can be explained by another variable that is not taken into account in this study.

Table 3
Multiple Linear Regression Analysis

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	3.331	0.350		9.518	0.000
WCT	-0.543	0.178	-0.393	-3.049	0.004
CT	-0.371	0.159	-0.301	-2.333	0.024

Source: Data Process, 2023

Table 4
Coefficient of Determination (R^2)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.579[a]	0.336	0.307	0.934

Source: Data Process, 2023

Statistical Test F

If the Fcount> Ftable value has a significance value of less than 0.05, then all independent factors are considered to influence the dependent variable jointly. Referring to Table 5 of the F test results, the Fcount value is 11.867 > Ftabel 3.15 and a significance value of 0.000 < 0.05 so that the independent variables in the study, namely working capital turnover (X1) and cash turnover (X2) affect the dependent variable profitability (Y).

Table 5
Statistical Test F ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	20.729	2	10.365	11.867	0.000[b]
Residual	41.048	47	0.873		
Total	61.778	49			

Source: Data Process, 2023

t Statistical Test

This test aims to find out whether the measuring variable has an influence on the dependent variable or not, with the provisions of tcount > ttable or a value of less than 0.05 significance. The t-test results in Table 6 show the t-value of the working capital turnover variable (X1) of -3.049. The absolute value of t count │-3.049│ and t table │2.001│ are 3.049 and 2.001. Then t count 3.049 > t table 2.001 and the significance value is 0.004 < 0.05, meaning that working capital turnover has a negative effect on profitability (Y). While the cash turnover variable (X2) is known to have a t value of -2.333, the absolute value of t count │-2.333│ and t table │2.001│. So that t count 2.333 > t table 2.001 and significance value 0.024 < 0.05 means that there is a negative effect of cash turnover on profitability (Y).

Table 6
t Statistical Test

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.331	0.350		9.518	0.000
WCT	-0.543	0.178	-0.393	-3.049	0.004
CT	-0.371	0.159	-0.301	-2.333	0.024

Source: Data Process, 2023

Difference in Working Capital Turnover, Cash Turnover, and Profitability between Before and During the COVID-19 Pandemic.

Based on the results of the Wilcoxon test, it is known that there is no difference in the working capital turnover variable. This finding supports previous research conducted by Putri et al (2023b) that in pharmaceutical sub-sector companies registered on the IDX, the impact of COVID-19 on working capital turnover is not significantly different. However, this result is not in line with

Nurfitriani (2022) research that most pharmaceutical industry companies experienced an increase.

According to the Wilcoxon test results, no difference exists in the cash turnover variable between before and during the COVID-19 pandemic. These results are not in line with research by Hartati, et al (2022) which explains that companies in the health sector experienced an increase in current assets as a result of an increase in cash and cash equivalents from the previous year or before the pandemic.

Based on the results of the Wilcoxon test on the profitability variable, it shows that there is no difference. This result is supported by previous research conducted by Fitriyani (2021) which states that the performance of the ROA ratio before and after the announcement of the COVID-19 pandemic has no significant difference. Hartati, et al (2022) also said that profitability financial performance is not different. However, this research is inconsistent with the research of Sari & Dura (2022) that there are differences in profitability as measured by ROA before and after the new normal era.

Effect of Working Capital Turnover on Profitability

According to the results of the t-test, the working capital turnover variable negatively affects profitability with ROA measurement. Higher working capital turnover reflects where liquid assets invested in working capital can rotate faster and return to cash in a relatively short time, the faster the company makes a profit. Increased demand in the healthcare sector may result in an increase in operational-related costs. In this study, the turnover of working capital has a detrimental impact on profitability., where a higher turnover of working capital will result in a decrease in profitability. According to Nurfitriani research (2022) the decrease in working capital and negative working capital in the pharmaceutical sector shows that the company has more current debt than current assets, thus having an impact on the company's financial performance, especially on measures related to liquidity. If sales are not accompanied by an increase in current assets, this can reduce profitability. Because the amount of debt owned by the company will affect the company's net profit after tax. These results are in line with the previous findings of Putri, et al (2023a) which showed a negative and significant impact on profitability of working capital turnover. However, these results differ from the findings by Rinofah & Sari (2022) assertion that working capital turnover on profitability is positive and significant.

Effect of Cash Turnover on Profitability

The t-test results in Table 6 show that the turnover of cash on profitability, expressed by ROA, is known to have a negative effect. The large speed of cash turnover shows that cash rotates quickly and is immediately available again. Judging from the average cash turnover during

the research period, the health sector companies continued to decline. During the pandemic, there have been changes in demand for health services. According to Ambarwati (2021), although there is an increase in demand for COVID-19-related services, demand for non-urgent or delayed services has decreased. So that it can have an impact on profitability, which depends on the income from these services. In addition, Nugraha and Siswatibudi (2022) also mentioned that the increase in operational costs and the issue of hospital reimbursement claims caused cash disruptions. Thus, cash rotates slowly in the process. So, this shows that cash turnover has an impact that results in a decrease in profitability. These results support the findings by Rinofah & Sari (2022) that there is a negative and considerable impact of turnover of cash on profitability. However, in contrast to the research of Eksandy & Dewi (2019), which found that cash turnover had a positive and significant impact on profitability.

5. Conclusion

In the health sector enterprises registered on the IDX before and during the COVID-19 pandemic, the data showed no difference in working capital turnover, cash turnover, or profitability. Working capital turnover and cash turnover negatively affect profitability before and during the COVID-19 pandemic. This study has limitations in that there are companies that experienced losses during the study period. The research only focuses on health sector companies listed on the IDX, so it cannot be generalized to companies in other sectors. And the research period used to describe before and during the COVID-19 pandemic was two years each.

Implications for the company: it is expected to be able to manage and increase working capital turnover and cash turnover. To reduce the possibility of losses, companies also need to carry out effective sales management. For investors, if they want to use the company's profitability level as a benchmark for decision making, it is necessary to analyze financial ratios first because they show how well the company can manage its finances, which has an impact on increasing profits. Suggestions for future researchers are expected to be able to expand or add by using other sector companies as research objects, and it's also anticipated that other variables from unrelated studies would be added.

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