

The Influence of Working Capital Management on Business Performance: Moderating Effect of COVID-19

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The aim of this research is to find the influence between Working Capital Management and Business Performance in COVID-19 era. The quantitative research methods, multiple regressions, secondary data and purposive sampling have been worked out. The authors have collected a panel of 16 of Healthcare Sector Company from Indonesia Stock Exchange in 2018-2021. The results of this study indicate that Working Capital Management measured by GWCR has an effect on business performance and NWCR has no effect on business performance measured by ROA and ROE. Meanwhile, Covid-19 did not moderate the influence between GWCR on business performance and Covid-19 was able to moderate the relationship between NWCR and business performance. By validating the findings with previous researchers, this research will contribute to the literature and business surveys. It will benefit academic, social and practical behavior.

Keywords: Working Capital Management, Business Performance, Covid-19, Indonesia

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3.1.

INTRODUCTION

The company as a form of organization generally has certain goals to be achieved the interests of stakeholders. The achievement of these goals is determined by performance which can later be used as the basis for decision making both internal and external parties. Investors will be in high demand for the firm's shares if the company achieves good results. The financial statements issued by the corporation show that the company has made significant progress (issuer). Management of company, besides of important operational activities should address its financial performance as well. The company's operational activities such as working capital have an influence on the company's readiness to operate.

COVID-19 has had a negative impact on all business sectors in Indonesia. According to data from the International Labor Organization (ILO) from May 2020, % of Indonesian businesses had ceased operations because of COVID-19. According to the figures above, the COVID-19 epidemic has a direct impact on about 65 percent of Indonesian enterprises. It is estimated that 2.6 percent of businesses have permanently ceased operations. In addition, 62.6 percent of businesses have temporarily halted operations, with only 3% resuming operations. Restrictions on company operations by the government have an impact on decreasing company income. The company's financial performance will surely be impacted by the drop in overall sales (Devi, Warasnasih and Masdiantini, 2020). The decline in sales, the cash generated by the company will decrease, and cause the business to be unable to run the company's operations properly.

The company strives as much as possible to get profit from each of its operational activities, so that it can attract investors to invest and prepare operational forecasts for the next current year. Liquidity and cash flow are two important components in economic and corporate development. Both have an important role during slowing economic growth (Utia, Dewi and Sutisna, 2018). Cash is an important component in business development, so it is very expensive for cash to be loaned to other parties. There are various alternatives for companies that can be done to direct the company to create or maximize a profit, namely by increasing the existing revenue or by reducing the operating costs of a company.

Working capital management encompasses all aspects of current asset investment management, as well as all sources of current asset financing, with the

goal of justifying a balance between returns and liquidity risk (García-Teruel and Martínez-Solano, 2007). Working capital management is vital for listed companies to maintain a healthy balance between liquidity and profitability. It is based on short-term financing decisions. If a company's conservative policy of storing more working capital is overshadowed, it will have to pay high liquidity costs, whereas an aggressive approach of maintaining low working capital will also have to pay high liquidity costs (Akgün and Memiş Karataş, 2020).

The company's growth is the thing that is most concerned by stakeholders to find out the value of the company. In research done by (Yusuf and Sani, 2018), the most crucial aspect of working capital management is maintaining liquidity in the company's day-to-day operations. This is critical to prevent creditors and suppliers with short-term claims from putting undue pressure on management, ensuring the smooth operation of the company. Operational stability and working capital owned by the company are important capital to run every company's operation, starting from assets, liabilities, to equity. Some researchers believe that efficient working capital management is critical for businesses during periods of rapid economic growth, and that it can be achieved to improve competitiveness and profitability, while others believe that improving working capital management is critical for businesses to survive the financial crisis (Abuzayed, 2012).

Working capital management guarantees that businesses are able to satisfy their short-term obligations when they fall due (Yusuf and Sani, 2018). The company's survival is determined by a variety of factors, including the company's profitability. Profitability is a metric for determining a company's worth. Managers that are unable to effectively manage their working capital have a negative impact on the company's growth and profitability, ultimately leading to financial crisis and insolvency (Utia, Dewi and Sutisna, 2018). Assessing profitability is very important for shareholders to meet company goals and assess company performance properly. In Research (Padachi, 2006), in assessing the Working Capital Management and impact to firm performance, to determine the causes of any substantial disparities between industries, the trend in working capital demands and company profitability was investigated.

Good working capital management will interpret how the financial manager in managing the company's liquidity. Working capital management requires more time from financial managers than any

other function (Iqbal and Zhuquan, 2014). Financial distress which is the company's inability to show good credit conditions to the company is also one of the assessments of business performance. Working capital interpreted with cash flows can also assist businesses avoid financial difficulty, especially if their cash flows are more violate (Ferreira and Vilela, 2004). Business performance assessment can not only be assessed by how the returns can be returned, but it is also important for stakeholders and companies to know how the value of liquidity is. As in the research was done by (Bagh et al., 2016), Because financial managers strive to maximize a company's profit, the primary purpose of any business and chief is to make the most profit working. However, maintaining a company's liquidity is another vital goal.

Research on working capital management has been carried out by several researchers. As research conducted by (García-Teruel and Martínez-Solano, 2007; Amponsah-Kwatiah and Asiamah, 2020; Morshed, 2020); and (Bagh et al., 2016) shows that Working Capital Management has a relationship with the level of profitability or business performance of the company. Calculation of working capital management becomes very important to assess the rate of return of money and the turnover of capital owned by the company. Companies should pay more attention to controlling WCM components such as ACP, APP, CCC, and ITO (Bagh et al., 2016). Different results are shown from research (Nobanee, Abdullatif and Alhajjar, 2011; Bagh et al., 2016; Yusuf and Sani, 2018) shows that profitability is not affected by the value of working capital management. Inventory conversion period policy requires more attention, as this would lower costs and increase profitability for Nigerian registered food and beverage enterprises.

Several studies on working capital have proven that working capital management has a significant effect on the company's financial performance. On the other studies have proven otherwise, meaning that there are inconsistencies in the research results. The inconsistency of this research is caused by differences in the object of research, the proxy for company performance variables and the analytical tools used. The inconsistency of these studies attracted the attention of researchers to find out the relationship between Working Capital Management and Business Performance with COVID-19 as a moderating variable. Research conducted by Tsuruta (2019) shows that there is no influence of Working Capital Management and

Business Performance during the global financial crisis in Japan.

The researcher has the objective to find the influence between Working Capital Management and Business Performance in COVID-19 era. The difference from the research that the author did was in the change in the proxy of working capital management. The researcher uses Gross Working Capital Ratio (GWCRCR) and Net Working Capital Ratio (NWCRCR) as a proxy of independent variable. In addition, the researcher also adds the COVID-19 as a moderating variable. The researcher wants to find out more about whether there is a moderating effect of COVID-19 on Working Capital Management and Business Performance. Moreover, there are also differences in the object and year of data collection in the research. The object of research studied by the author is a health sector company listed on the Indonesia Stock Exchange in 2018-2021.

This paper contributes to literature. Previous literature shows the impact of COVID-19 Pandemic in all sectors, but still lack literature that provide the evidence its impact to health institutions. This article contributes to expanding the existing literature by investigating the response of companies affected by the COVID-19 pandemic, in a special sector, namely the healthcare sector. Furthermore, this research demonstrates that a company's capacity to effectively manage its assets and diverse liabilities can generate value and indicate optimal corporate performance, even in the face of COVID-19's impact. Since, the macro-and-microeconomics factors is a once mainstream factor that can affect the financial condition, so the practitioners should have a preventive strategies in uncertainty in the future.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Working Capital Management and Business Performance

Working capital may also be regarded as the balance between total current assets and current liabilities. Net working capital, operating working capital, and financial working capital are the three types of working capital (Akgün and Memiş Karataş, 2020). Working capital management is an important part of corporate finance theory since it deals with the management of current assets and current liabilities, which can have an impact on a company's growth, profitability, and liquidity (Sharma and Kumar, 2011).

In research done by (Eljelly, 2004) Working capital management is one of the most significant aspects to consider when comparing organizations' liquidity and profitability, since it involves deciding on the size and composition of current assets as well as financing these assets.

Working capital management is considered an important calculation of company profitability. Working capital management aims to strike a balance between liquidity and profitability in a company's operations (Utia, Dewi and Sutisna, 2018). WCM is essential for a business profitability (Sharma and Kumar, 2011). In research done by (Baños-Caballero, García-Teruel and Martínez-Solano, 2019), stated NWC is defined in corporate finance literature as the total of accounts receivable and inventories, minus accounts payable. WCM ensures that a company can continue to operate and that it has enough cash flow to pay down short-term debt and cover upcoming operating needs (Bhatia et al., 2021). The amount of cash maintained by businesses demonstrates the relevance of cash flow to their success (Afrifa, 2016).

Apart from capital structure and capital budgeting, managing working capital is critical in the corporate sector since working capital influences the company's returns (Manazir et al., 2016). "The management of current assets and current liabilities, as well as the financing of these current assets" is how working capital management is defined. Working capital management is critical for maximizing shareholder value. In research conducted in several nations, working capital management was proven to have a considerable impact on business returns and liquidity. Working capital is the most crucial factor for maintaining liquidity, survival, solvency and profitability of business (Mukhopadhyay, 2004).

Working capital management increases a firm's efficiency and, as a result, influences its business performance and competitiveness in expanding markets (Abuzayed, 2012; Bhatia and Srivastava, 2016). Stakeholders are more concerned about the company's performance. Good company performance shows that the company's operations are good and the company is able to generate high profits. Shin and Soenon (1998) in research (García-Teruel and Martínez-Solano, 2007), Working capital management is a significant area of financial management, and the administration of working capital may have an important impact on the profitability and liquidity of the firm.

Development of Firm Performance in Pandemic COVID-19 Hypothesis Development

When managing working capital, managers must always examine the tradeoff between liquidity and profitability (Enqvist, Graham and Nikkinen, 2014). A faster rise in the cost of higher working capital investment compared to the benefits of retaining more inventories and/or giving trade credit to customers could result in a drop in corporate profitability. A lot of research has been done on the effect of Working Capital Management. Research was done by (García-Teruel and Martínez-Solano, 2007; Dalci and Ozyapici, 2018; Baños-Caballero, García-Teruel and Martínez-Solano, 2019; Amponsah-Kwatiah and Asiamah, 2020); (Chambers and Cifter, 2022) shows relationship between Working Capital Management and Business performance. The effect of working capital management on business performance has been tested in research (Amponsah-Kwatiah and Asiamah, 2020). The research shows that Working Capital Management has had a positive impact on business performance. The increase in the company's accounts receivable which is one component of Working Capital has an effect on increasing the company's profitability. As a result of the lengthier Cash Conversion Cycle, Working Capital has a significant impact on the profitability of manufacturing enterprises in Indonesia. It also plays a crucial role in value generation for shareholders (Raheman et al., 2010).

The relationship between Working Capital Management and business performance has different results with research conducted by (Nobanee, Abdullatif and Alhajar, 2011; Dalci and Ozyapici, 2018; Yusuf and Sani, 2018). Working capital management has a negative effect on business performance. While the research conducted by (Bagh et al., 2016; Tsuruta, 2019; Othuon et al., 2021); and (Bhatia et al., 2021) have a difference in results is due to the different proxies used. In research done by (Raheman et al., 2010), companies with low working capital with the aim of increasing profits, meaning a low relationship between working capital and business performance. According to the above-mentioned literature analysis, there are clearly contradicting conclusions about the impact of working capital management on business performance. So, the researchers took the hypothesis to be tested, namely:

Hypothesis 1: The influence of Working Capital to Business Performance

As we known, Covid-19 has had a negative impact on business operations within 2 years. This research attempts to answer the following research questions: is COVID-19 moderating the relationship between working capital management and business performance. Like financial crisis on 2008, this crisis was a prime example of a company's capital and operations being badly impacted. Firms have more difficulties raising essential cash through banking institutions during a financial crisis (Ivashina and Scharfstein, 2010). COVID-19, a new and infectious disease, first appeared in Wuhan, China, in early 2020, and due to its broad prevalence around the world, most countries have suffered from its economic devastation (Song, Yeon and Lee, 2021a). Uncertainty about the pandemic's impact is difficult to analyze and assess.

The pandemic has had a significant influence on real economic activity, but the true magnitude of the impact is unknown due to uncertainty about the disease's spread, severity and mortality, proper policy measures, and human behavior (Song, Yeon and Lee, 2021a). A company's working capital management isn't in good shape during a financial crisis, it may have a liquidity crisis, which increases the possibilities of going bankrupt (Chang et al., 2019). The managers of such companies, which play an important role in economic growth, are very much looking for strategies that can always improve their financial situation. Because keeping appropriate liquidity is critical to a company's long-term financial performance, knowledge about the company's chosen method appears to be more dependent on liquidity status (Zimon and Tarighi, 2021). Companies must come up with their own strategies for minimizing liquidity. Financial crises, for example, are a common occurrence in today's economic sector. With this explanation, the researchers raised the hypothesis, namely:

Hypothesis 2: Covid-19 as a moderating role in the influence working capital to Business Performance.

RESEARCH METHOD

Data

The data used in this study were obtained from the Indonesia Stock Exchange (IDX) database, a comprehensive database containing annual report of Healthcare Sector Company from 2018-2021. The total

listed companies are 24 companies with 16 companies reporting annual reports from 2018-2021. Healthcare Sector is one of the corporate sectors affected by COVID-19. The type of data in this research is secondary data. The data collected using documentation method where is the sample is selected using purposive sampling method.

According to data obtained from the Indonesian Central Statistics Agency in 2020, through the Indonesia Stock Exchange, nearly 82.85% of companies were affected by Covid-19. The accommodation sector, and the consumer goods industry are the sectors that are the largest affected in Indonesia. Both sectors experienced a decrease in income as much as 92.47%. The Healthcare Sector is one of the consumer goods industry sectors which is one of the sub-sectors affected by Covid-19.

Variable Measurement

a. Dependent Variable

In determining profitability and assessing, a company's success can be accomplished using a variety of approaches, including accounting ratios, market valuation, and gauging a subject's perception (non-financial subject). The dependent variables for business performance proxies are return on assets (ROA) and return on equity (ROE). In the literature, the key ratio for evaluating corporate performance is ROA. According to (Afrifa, 2016), (Akgün and Memiş Karataş, 2020)), and (Utia, Dewi and Sutisna, 2018), ROA as a proxies in measurement of profitability or company performance. ROA measures the return on total assets after interest and taxes. The higher the ROA value, it can be indicated that the effectiveness of asset management of the company is good (Othuon et al., 2021). ROE is the ratio of returns obtained by stakeholders from the capital provided to the company. ROA and ROE has a formula respectively described below:

$$ROA = \frac{\text{Net Profit}}{\text{Total Assets}}$$

$$ROE = \frac{\text{Net Profit}}{\text{Total Equity}}$$

b. Independent Variable

Several studies show the effect of working capital management on business performance. Determining the effect on working capital management and business performance can use various proxies. Research by (Enqvist, Graham and Nikkinen, 2014), and (Yusuf and Sani, 2018) used Cash Collection Cycle in measuring the working capital management. And in

the other research was done by (Akgün and Memiş Karataş, 2020), and (Afrifa, 2016) working capital management was calculated by Gross Working Capital and Net Working Capital.

In this research, researcher use Gross Working Capital Ratio and Net Working Capital Ratio as a proxies of Working Capital Management. Gross working capital reflects a company's capacity to utilize

short-term resources efficiently and its short-term financial health. Gross working capital includes assets such as cash, accounts receivable, inventory, short-term investments, and marketable securities. Meanwhile, net working capital is a measure of a company's ability to pay off its debts and maintain its financial health. The formula of Gross Working Capital Ratio (GWCR) and Net Working Capital Ratio (NWCR) respectively are:

$$NWCR = \frac{\text{Current Assets (Excluding Cash and Cash Equivalent)} - \text{Current Liabilities}}{\text{Total Assets}}$$

$$GWCR = \frac{\text{Current Assets}}{\text{Total Assets}}$$

c. Moderating Variable

The year 2019-2021 was one of the downturns of global economic conditions affected by the Covid-19 pandemic. Covid-19 is an infectious disease caused by SARS-CoV-2, a type of coronavirus. The reason, scope, and severity of previous financial crises, as well as the economic crisis brought on by the Coronavirus, strongly suggest that this one is absolutely unique (Song, Yeon and Lee, 2021). Covid-19 has had an impact on various sectors, such as the economy, business, education and others. The impact of COVID-19 has caused several businesses around the world to experience a decline in income and unable to fulfill their business obligations. Decisions on working capital management strategies during the COVID-19

pandemic are the most important and challenging tasks for corporate executives as they can play a decisive role in improving the company's financial situation in times of crisis (Zimon and Tarighi, 2021). According to Ali et al., (2022) to revealing that people and businesses suffer from vulnerability scenarios that have cause and effect on current macroeconomic and microeconomic indicators. According to Ozili (2021), the difference between Nigeria's economic crisis due to COVID-19 and the economic crisis in the country over the past few years is that most economic actors who should be able to help revive the economy, cannot carry out economic activities for fear of contracting the COVID-19 disease.

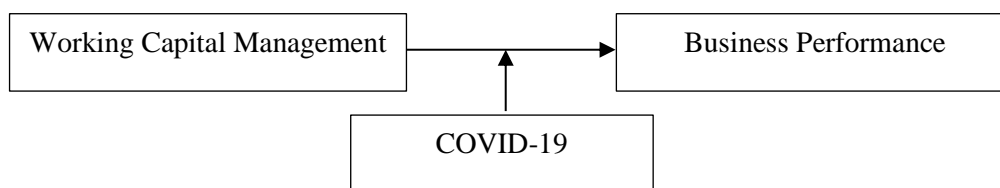


Figure 1: Research Model

Methodology

There are two types of panel data models: balanced panels and unbalanced panels. An unbalanced

panel is defined as one in which each variable/individual has a varied number of time observations. To assess the relationship between Working Capital Management with Business performance, researcher use the following model:

$$\text{Business Performance} = \alpha + \beta_1GWCR + \beta_2NWCR + \epsilon \quad (1)$$

And to calculate whether Covid-19 moderates the relationship between Working Capital Management and Business Performance, researcher use the model

$$\text{Business Performance} = \alpha + \beta_1GWCR + \beta_2NWCR + \beta_3GWCR.Covid19 + \beta_4NWCR.Covid19 + \epsilon \quad (2)$$

Where business performance is measured by ROA, ROE and EBITM; GWCR is the gross working capital ratio, NWCR is the net working capital ratio; Covid-19 as a moderating effect.

RESULTS AND DISCUSSION

The descriptive statistic is a summary statistic that quantitatively describes the characteristics of a

collection of information (Enqvist, Graham and Nikkinen, 2014). Descriptive statistics are important for seeing a general picture of the data before carrying out a more in-depth and comprehensive analysis. To analyze the data, the descriptive statistics including minimum, maximum, mean, and median also other statistical test are presented in the table below.

Table 1: Descriptive statistics

	GWCR	NWCR	ROA	ROE	Z
Mean	0.539729	0.115125	0.089417	0.134122	0.500000
Median	0.552730	0.132209	0.076288	0.123305	0.500000
Maximum	2.025120	1.660985	0.921472	2.245742	1.000000
Minimum	0.052107	-1.586824	-0.237865	-0.823466	0.000000
Std. Dev.	0.277782	0.346893	0.136428	0.311890	0.503953
Skewness	2.206028	-0.533940	3.461425	4.502144	0.000000
Kurtosis	14.04478	16.04081	23.14659	35.37099	1.000000
Jarque-Bera	377.2093	456.5419	1210.163	3010.556	10.66667
Probability	0.000000	0.000000	0.000000	0.000000	0.004828
Sum	34.54266	7.368021	5.722709	8.583824	32.00000
Sum Sq. Dev.	4.861273	7.581088	1.172591	6.128355	16.00000
Observations	64	64	64	64	64

Source: Eviews 12

Total observations or samples used in this study were 64 data consisting of 16 companies. The average company has a GWCR value of 0.53 and a NWCR of 0.11. Indirectly, the company has a good Net Working Capital value when viewed from the average GWCR value. Then the ROA and ROE of each company have an average value of 0.08 and 1.13. This value was obtained by testing descriptive statistics in the E-views econometric application for more robust result.

The data testing can be seen in the next table. In testing the data, the data can be tested with several tests and models. To choose the approach model in hypothesis testing, the data were tested using the Chow

test, the Hausman test, dan uji LM. Moreover, to test the hypothesis in this study using different approach models, such as Random Effect Model (REM), Common Effect Model (CEM), and Fixed Effect Model (FEM). To test the data using the ROE proxy using the CEM model and for the independent variable using the ROA proxy.

Table 2 provides the results statistics for the dependent and independent variables. The second table provides the estimated results of independent variable to dependent variable using ROE as a proxy. The sample of the results used the data between period 2018 to 2021.

Table 2: The result of first research model on ROE

Dependent Variable: ROE		Sample: 2018 2021		
Method: Panel Least Squares		Periods included: 4		
Date: 06/06/22 Time: 08:45		Cross-sections: 16		
Total panel (balanced) observations: 64				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.129495	0.094737	-1.366894	0.1767
GWCR	0.563638	0.181093	3.112421	0.0028
NWCR	-0.352611	0.145014	-2.431556	0.0180
R-squared	0.139427	Mean dependent var		0.134122
Adjusted R-squared	0.111212	S.D. dependent var		0.311890
S.E. of regression	0.294036	Akaike info criterion		0.435513
Sum squared resid	5.273895	Schwarz criterion		0.536711
Log likelihood	-10.93642	Hannan-Quinn criter.		0.475380
F-statistic	4.941516	Durbin-Watson stat		1.883760
Prob(F-statistic)	0.010257			

Source: [Eviews 12](#)

According to the result of Common Effect Model of first model relied on ROE, the Adjusted R-Squared value of 0.1112 means GWCR, and NWCR is able to explain the ROE of 11.12% while the rest (100 – 11.12 = 88.88%) is explained by other variables outside the research model. For F-Statistic value is 4.9415 with a probability of 0.0103. With probability less than 0.05 the independent variables GWCR and NWCR together proved to have an effect on ROE. In the results of the t-test in the table above are obtained as follows: (1) The coefficient of the effect of GWCR

on ROE is 0.5636 with a t-statistic of 3.1124 and a significance of 0.0028. Because the coefficient is positive and the significance is less than 0.05, the GWCR is proven to have a significant positive effect on ROE; (2) The coefficient of the effect of NWCR on ROE is -0.3526 and the t-statistic is -2.4316 and the significance is 0.0180. Because the coefficient is negative and the significance is less than 0.05, the NWCR is proven to have a significant negative effect on ROE. The third table provides the estimated results of independent to dependent variable using ROE.

Table 3: The result of first research model on ROA

Dependent Variable: ROA		Sample: 2018 2021		
Method: Panel EGLS (Cross-section random effects)		Periods included: 4		
Date: 06/06/22 Time: 08:37		Cross-sections: 16		
Total panel (balanced) observations: 64				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.003588	0.045804	-0.078326	0.9378
GWCR	0.204780	0.082703	2.476075	0.0161
NWCR	-0.152188	0.061878	-2.459483	0.0168
Effects Specification			S.D.	Rho
Cross-section random			0.071464	0.3007
Idiosyncratic random			0.108977	0.6993
Weighted Statistics				
R-squared	0.102934	Mean dependent var		0.054216
Adjusted R-squared	0.073522	S.D. dependent var		0.114294
S.E. of regression	0.110012	Sum squared resid		0.738260
F-statistic	3.499737	Durbin-Watson stat		1.912181
Prob(F-statistic)	0.036403			
Unweighted Statistics				
R-squared	0.096292	Mean dependent var		0.089417
Sum squared resid	1.059680	Durbin-Watson stat		1.519103

According to the result of Random Effect Model of first model relied on ROA, the Adjusted R-Squared value of 0.0735 means GWCR, and NWCR is able to explain ROA of 7.35% while the rest (100 – 7.35 = 92.65%) is explained by other variables outside the research model. Based on the results above, it is known that the F-Statistic value is 3.4997 with a probability of 0.0364. The probability value < alpha 5% then the independent variables GWCR and NWCR together proved to have an effect on ROA. Moreover, in the results of the t-test in the table above are obtained as follows:

1. The coefficient of the effect of GWCR on ROA is 0.2047 with a t-statistic of 2.4761 and a significance of 0.0161. Because the coefficient is positive and the significance is less than 0.05,

the GWCR is proven to have a significant positive effect on ROA.

2. The coefficient of the effect of NWCR on ROA is -0.1522 and the t-statistic is -2.4595 and the significance is 0.0168. Because the coefficient is negative and the significance is less than 0.05, the NWCR is proven to have a significant negative effect on ROA.

Then to test the moderating effect of COVID-19 on the dependent and independent variables, the researchers used dummy variables as data from COVID-19. The results of the hypothesis test are seen from the magnitude of the value of the interaction variable and t-statistics from the common effects model test approach for ROE and random effects for ROA.

Table 4: The result of second research model on ROE

Dependent Variable: ROE
 Method: Panel Least Squares
 Date: 06/06/22 Time: 10:41
 Sample: 2018 2021
 Periods included: 4
 Cross-sections included: 16
 Total panel (balanced) observations: 64

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GWCR	0.672745	0.129398	5.199050	0.0000
NWCR	-0.861835	0.224777	-3.834171	0.0003
GWCR_Z	-0.436032	0.159049	-2.741497	0.0080
NWCR_Z	0.818216	0.268414	3.048332	0.0034
R-squared	0.243631	Mean dependent var		0.134122
Adjusted R-squared	0.205813	S.D. dependent var		0.311890
S.E. of regression	0.277948	Akaike info criterion		0.337694
Sum squared resid	4.635297	Schwarz criterion		0.472625
Log likelihood	-6.806218	Hannan-Quinn criter.		0.390850
Durbin-Watson stat	1.815717			

Source: Eviews 12

From the results of hypothesis testing on the second research model using the common effects approach, it was found that Covid-19 was able to moderate GWCR on ROE but was unable to moderate NWCR on ROE. The coefficient of the effect of GWCR on ROE with Covid-19 as an interaction variable is -0.4360 with a t-statistic of -2.7415 and a significance of 0.0080. A negative coefficient value with a significance of less than 0.05 means that Covid-19 is proven to be able to moderate the negative effect of GWCR on ROE.

While the results are different to analyze the large coefficient of the interaction variable in the NWCR. The coefficient of the effect of NWCR on ROE with Covid-19 pandemic as an interaction variable is 0.8182 with a t-statistic of 3.0483 and a significance of 0.0034. Because the coefficient value is positive and the significance is less than 0.05, Covid-19 pandemic variable is proven to be able to positively moderate the effect of the NWCR on Return on Equity or ROE.

Table 5: The result of second research model on ROE

Dependent Variable: ROA
Method: Panel EGLS (Cross-section random effects)
Date: 06/06/22 Time: 10:35
Sample: 2018 2021
Periods included: 4
Cross-sections included: 16
Total panel (balanced) observations: 64
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.079421	0.047987	-1.655040	0.1032
GWCR	0.510367	0.107760	4.736158	0.0000
NWCR	-0.544189	0.112858	-4.821896	0.0000
GWCR_Z	-0.199449	0.058096	-3.433075	0.0011
NWCR_Z	0.440821	0.115516	3.816092	0.0003

Effects Specification		S.D.	Rho
Cross-section random		0.074736	0.3802
Idiosyncratic random		0.095420	0.6198

Weighted Statistics			
R-squared	0.291731	Mean dependent var	0.048114
Adjusted R-squared	0.243712	S.D. dependent var	0.111255
S.E. of regression	0.096753	Sum squared resid	0.552306
F-statistic	6.075409	Durbin-Watson stat	1.883872
Prob(F-statistic)	0.000366		

Unweighted Statistics			
R-squared	0.225853	Mean dependent var	0.089417
Sum squared resid	0.907757	Durbin-Watson stat	1.364151

Source: Eviews 12

In testing the second model using the ROA proxy, it shows the same results as the hypothesis testing in the second model with ROE. The moderating effect of Covid-19 on WCM and Business performance is only shown in the NWCR on ROA. Covid-19 was unable to moderate GWCR against ROE. The coefficient of the effect of GWCR on ROA with Covid-19 as an interaction variable is -0.1995 with a t-statistic of -3.4331 and a significance of 0.0011. A negative coefficient value with a significance of less than 0.05 means that Covid-19 is proven to be able to moderate the negative effect of GWCR on ROA.

The coefficient of the effect of NWCR on ROA with Covid-19 as an interaction variable is 0.4408 with a t-statistic of 3.8161 and a significance of 0.0003. Because the coefficient is positive and the significance is less than 0.05, Covid-19 has been shown to be able to positively moderate the effect of the NWCR on ROA.

DISCUSSION

Working capital management as seen from the GWCR component has a significant influence on business performance. These results are in accordance with research conducted by [García-Teruel and Martínez-Solano \(2007\)](#); [Dalci and Ozyapici \(2018\)](#); [Baños-Caballero, García-Teruel and Martínez-Solano \(2019\)](#); [Amponsah-Kwatiah and Asiamah \(2020\)](#); [Chambers and Cifter, \(2022\)](#). This result implies that the Gross Working capital ratio in the form of gross working capital is able to generate value for the company and is able to provide a good return for the company or stakeholders. The company's current assets show that it is able to generate high income for the company. With a good GWCR value, the company will also gain high trust from stakeholders and investors. A good GWCR value also shows that every current asset owned by the company, as a capital, allows the company to operate efficiently and the company allows

the company to have sufficient inventory value to serve consumers.

Meanwhile, the results of the NWCR component as a component of the independent variable have no effect on business performance. These results are in line with research conducted by [Nobanee, Abdullatif and Alhajar \(2011\)](#); [Dalci and Ozyapici \(2018\)](#); [Yusuf and Sani \(2018\)](#). In their research, they show that the working capital component has no effect on business performance. This result implies that NWCR as the difference between current assets and short-term liabilities of the company is not able to affect the value of ROA and ROE. A bad NWCR value allows the company to be unable to make good returns on credit or the company will reduce the level of trust of every stakeholder, even creditors. Covid-19 does not moderate the influence between Working capital management and the GWCR component on Business performance with ROE and ROA proxies. Even though Covid-19 was unable to moderate the working capital management component of GWCR, Covid-19 was able to moderate the influence between working capital management and the NWCR component on business performance with ROE and ROA proxies. These results are supported in the research conducted oleh [Song, Yeon and Lee \(2021\)](#); [Chang et al., \(2019\)](#); [Zimon and Tarighi \(2021\)](#); and [Tsuruta \(2019\)](#). The researchers conducted research on working capital in various conditions in the form of financial disaster and natural disaster. Those results imply that during Covid-19 has had an impact on the global economy, even causing all countries to experience a financial crisis for 2 years running. In research [Tsuruta \(2019\)](#), government support during financial crises (for example, public credit guarantees and government lending) is currently not necessary for financing working capital. Various regulations and policies made by the government to reduce the crisis and increase the bankruptcy of the company. The policy of eliminating loan payments at the beginning of the pandemic, is not necessarily able to save finances and company development.

CONCLUSION

The success of a company can be seen from the success and ability of the company to maximize working capital productively. In the case of small and medium-sized businesses, working capital management is crucial ([García-Teruel and Martínez-Solano, 2007](#)). Working capital management is important because it can affect the company, profitability and risk

management. Covid-19 impact on the global economy. The company tries as much as possible to earn profit and fulfill liabilities with decreased revenue, reduced capital.

Working capital management as seen from the GWCR component has a significant influence on business performance. A healthy GWCR value also demonstrates that every present asset the company owns, as capital, enables it to function effectively and to maintain enough inventory value to meet consumer needs. Meanwhile, the results of the NWCR component as a component of the dependent variable have no effect on business performance. A low NWCR value makes it possible for the business to either fail to provide satisfactory returns on loans or to lose the confidence of all stakeholders, including creditors. Covid-19 does not moderate the influence between Working capital management and the GWCR component on Business performance with ROE and ROA proxies. Even though Covid-19 was unable to moderate the working capital management component of GWCR, Covid-19 was able to moderate the influence between working capital management and the NWCR component on business performance.

This research contributes to the analysis of the effect of working capital management on business performance moderated by Covid-19. Then this research contributes to investors to see how the condition and stability of the company in the company's performance during the pandemic and before the pandemic. The researcher suggests for further researchers to add other variable components such as control variables, or add other proxies to see the impact of the Covid-19 pandemic. Apart from that, the dynamic panel method or GMM model, for example, can be used ([Prakoso, 2020, 2022](#); [Rusyidiana & Prakoso, 2021](#)).

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