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Financial Liquidity of Indonesian Manufacturing Companies before and during the COVID-19 Pandemic

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Abstract

The occurrence of the COVID-19 pandemic has had a significant impact on human life in the world, including the companies' business activities. Increased business risk makes financial liquidity an essential financial policy in the face of a pandemic. This study analyzes differences in liquidity before and during the COVID-19 pandemic in manufacturing companies on the Indonesian Capital Market. There are three financial liquidity ratios tested in this research: the current ratio, the quick ratio, and cash holdings. Empirical testing of this research uses the Wilcoxon signed rank test. The empirical findings of this research have not been able to prove a difference between the current ratio and the quick ratio in the period before and during the COVID-19 pandemic. However, this study proved that there were differences in cash holdings in the period before and during the COVID-19 pandemic in the case of manufacturing companies on the Indonesian Capital Market. This research implies that manufacturing companies on the Indonesian Capital Market apply a conservative financial strategy in the face of the COVID-19 pandemic. The company adopted a policy of increasing the company's cash holdings as an effort to maintain adequate company liquidity, maintain the sustainability of business operations, and prevent bankruptcy.

Key terms: liquidity, pandemic, risk, cash, finance

JEL Classification: G32, L69

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➲ Introduction

Almeida (2021) stated that the COVID-19 pandemic has caused economic pressure on the business and financial performance in the United States and other countries worldwide. Business pressures due to the pandemic increase liquidity risk for companies. The pandemic condition is complex and makes the need for company liquidity very difficult to predict. The COVID-19 pandemic pressure requires financial managers to carefully formulate company funding policies and the company's financial liquidity risks. Mathyinparasan (2019) stated that the company's liquidity management would be closely related to efforts for maintaining the business as ongoing concerns. In a crisis, the company must maintain the level of liquidity at a sufficient level to carry out the company's daily activities. Li *et al.* (2020) state that the liquidity policy will pay the company's short-term debt.

Yassen and Omet (2021) explained that the COVID-19 pandemic have put significant pressure on world financial markets. The pandemic has caused increased risk, high business uncertainty, and a real crisis in all sectors

of the economy. Financial authorities from various countries made a series of policies to prevent market collapses, reduce volatility and maintain the stability of capital markets. Shen *et al.* (2020) public health policies regarding COVID-19 have limited various human activities worldwide. The pandemic has seen declining corporate activity, corporate performance, and business bankruptcy at the enterprise level. The pandemic has affected aspects of production, company operations, and decreased sales, which impacts the company's overall performance. The pandemic outbreak has forced companies to save on production and consumption. The company's business strategy during the pandemic is closely related to the company's efforts to maintain liquidity and face financial difficulties.

The negative impact of the COVID-19 pandemic has also occurred in Indonesia. Health policies adopted by the Indonesian government impact all industrial sectors in Indonesia. Ambarwati *et al.* (2021) stated that since the COVID-19 pandemic the Indonesian capital market experienced quite severe instability and setbacks. The economic shock due to the COVID-19 pandemic has also occurred in all industrial sectors in Indonesia, including the manufacturing industry on the Indonesian Capital Market. The company's business operations were disrupted and experienced a slowdown to increase risk and uncertainty. Devi *et al.* (2020) explained that the occurrence of the COVID-19 pandemic made the Indonesian government revise the projection of state revenues from tax sources. The pandemic has caused many companies to experience financial difficulties. The economic crisis due to the pandemic can cause the company to experience a decline in sales, impacting the company's profit decline. Some companies are predicted to experience a decline in sales and liquidity difficulties that impact financial difficulties. Ambarwati *et al.* (2021) explained that efforts to optimize company value were disrupted during a pandemic. This problematic condition is undoubtedly recognized and understood by all company stakeholders. The company's policy is focused on keeping the business running. The company has liquidity at a safe level and is not trapped in financial difficulties impacting business bankruptcy.

This study will analyze the liquidity conditions of manufacturing companies on the Indonesian Capital Market before and during the COVID-19 pandemic in Indonesia. Rahman *et al.* (2020) stated that the company's liquidity shows its ability to pay off its short-term debt. The liquidity describes the availability of cash that can finance business activities and the company's immediate and urgent operational needs. During this pandemic, liquidity is a critical policy. A company's liquidity crisis is the same as a cash crisis, so it is a condition that companies must avoid. Dahiyat *et al.* (2021) explain that the company's liquidity management strategy is a company's effort to meet short-term obligations and immediate cash needs without significant losses. Li *et al.* (2020) explain that the need for adequate liquidity is not trivial for companies. Liquidity is part of the development and improvement of the company. Liquidity is a company's commitment to pay off short-term debts that are due. The company's liquidity shows its ability to convert its assets into cash and maintain a good image in front of creditors and company customers.

This research contributes to analyzing the financial liquidity of manufacturing companies in Indonesia before and during the COVID-19 pandemic. Previous research conducted by Shen *et al.* (2020), Yassen and Omet (2021) stated a decline in financial performance during the COVID-19 pandemic. This study focuses on the financial liquidity of manufacturing companies in Indonesia as measured by the current ratio, quick ratio and cash holdings. Financial liquidity is a company's source of strength to survive business pressures (Rahman *et al.*, 2020). Therefore, this study will describe the liquidity condition of manufacturing companies in Indonesia and whether there are significant differences in liquidity during this pandemic. This study has three research questions to be answered in the following details:

1. Is there a significant difference in the current ratio of manufacturing companies in Indonesia before and during the COVID-19 pandemic?

2. Is there a significant difference in the quick ratio of manufacturing companies in Indonesia before and during the COVID-19 pandemic?

3. Are there significant differences in cash holdings from manufacturing companies in Indonesia before and during the COVID-19 pandemic?

The next part of this research is designed as follows: The second part describes the literature review related to corporate liquidity, the third part discusses research data, samples and data analysis techniques, the fourth part describes the results of the analysis and research discussion, the fifth part conveys the conclusions, limitations and suggestions for future research.

➲ Review of literature and hypothesis

■ The importance of financial liquidity

Kontuš and Mihanović (2019) explain that liquidity is an essential aspect of the company's short-term financial management. Dahiyat *et al.* (2021) explain that corporate liquidity is a strategy and process ensuring that companies have good access to cash to pay for goods and services, costs and company investment opportunities. As a result, liquidity has a significant role in the company's investment decisions. Generally, a company's investment decision begins with reviewing the availability of internal funds and then analyzing the need for external funds.

According to Kontuš and Mihanović (2019), liquidity management is related to the availability of cash to finance investments and optimize company profits. The company's liquidity is also related to protecting the company's current and future activities. What is meant by the liquidity function for current activities is business operational activities which include the purchase of goods, production, sales and payment of company expenses. The strategy and regulation of the company's cash inflows and outflows is a vital issue. The future protection function of liquidity is a function of the availability of cash to deal with unexpected cash needs in the future.

Li *et al.* (2020) state that financial liquidity meets business operational costs and unexpected costs. The company's financial liquidity must be maintained at a sufficient level to pay off the company's maturing debts. Liquidity and company performance are two financial conditions that will be interrelated. Companies can achieve optimal performance if they vary and balance their assets and debts. Companies that have a poor liquidity position have a low performance. Companies must maintain a balance between the company's ability to pay debts and, on the other hand, still be able to maintain the company's liquidity and profitability.

According to Zimon (2020), three types of corporate strategies are related to liquidity management. The first is a conservative strategy. This strategy maintains the company's liquidity at a high level, in order to maintain liquidity at a very safe level. The company implements an optimal inventory system and the company's receivables are managed with a shorter payment period. The company manages debt with a maturity speed, and the production process is carried out for specific orders. The second strategy is aggressive. In this strategy, the company adopts a risky policy with low liquidity. The company's short-term investment is small, the amount of free cash flow is small and only adjusted to the needs of the company's short-term debt. The third strategy is a moderate policy related to the company's working capital. This strategy is in the middle of a conservative and aggressive policy. This policy is almost the same as the conservative policy on liquidity, and the difference is that the company provides a little leeway on consumer receivables.

Karim *et al.* (2021) stated that many large companies in the United States had liquidity difficulties during the COVID-19 pandemic. Many large banks increase the company's liquidity balance to maintain high demand for cash during the pandemic period for both individuals and companies. The COVID-19 pandemic has damaged almost all business sectors in various countries. The government's health policy to overcome the pandemic has affected the company's business activities. The existence of a work from home policy, restrictions on social community activities, and various other restrictive policies have put pressure on business activities in Indonesia. The company experienced increased business risk due to the threat of disrupted production activities, decreased sales and increased risk of financial difficulties. Abbas *et al.* (2021) stated that liquidity is easy to define, but difficult to implement. Financial liquidity will be significantly influenced by the community's size, market conditions, timing

and socioeconomic conditions. The pandemic is a difficult situation with regard to liquidity strategies. Liquidity measures the availability of cash, the ability to convert assets into cash and the ability to pay debts as they mature.

The company's financial liquidity conditions during the COVID-19 pandemic can be seen from two perspectives. First, the condition of the COVID-19 pandemic can be analyzed as business pressure or a crisis for companies in Indonesia. Referring to Yassen and Omet (2021), the pandemic situation will reduce the company's performance. Suppose that the company experiences a decrease in financial profitability followed by a decrease in the company's cash inflows. In that case, there is a possibility that the company's liquidity will decrease during the COVID-19 pandemic. Karim *et al.* (2021) conducted a study on the impact of COVID-19 on the banking industry in Bangladesh. This study found a decline in banking liquidity and financial health during the pandemic. In the second quarter of 2020, almost all banks have poor liquidity and are in a position where Islamic banking has low liquidity compared to general banking in Bangladesh.

The researcher's second thought is that the COVID-19 pandemic will increase the company's liquidity ratio. This thinking is based on Zimon (2020), which states that the company applies a more conservative liquidity management strategy by having higher liquidity in crisis conditions. Companies have cash as a precaution against uncertain company conditions (Kim *et al.*, 1998). During a pandemic, the company must anticipate all the worst possible risks to the company's business. Therefore, the company carried out various efficiencies in business operations and adopted a stricter cash policy during the pandemic. This condition can cause the company's liquidity ratio to increase during a pandemic. This company policy is a form of anticipating a very uncertain situation and keeping the company more financially sustainable in the following years during the pandemic.

■ Hypothesis development

Demirgüneș (2016) states that liquidity and profitability are two related things that focus on the investors' attention. Liquidity affects the company's investment. Therefore, the company's investment will affect the company's profit and return in the future. Mathyinparasan (2019) explain that an increase in liquidity can reduce the level of future profitability of the company. Therefore, companies must look for strategies to obtain the best composition in determining liquidity, so that company profits could be optimal and business operational activities should be well maintained. This condition is difficult to achieve, especially since the COVID-19 pandemic has put higher business pressure than the economic crisis.

Demirgüneș (2016) explains that the evaluation of the company's liquidity will be related to the company's working capital management. The measure of liquidity is generally seen from the relationship between current assets and current liabilities, quick ratio, cash investment cycle, and the company's cash ratio. The current ratio is the most widely used measure to measure liquidity. Lako (2020) states that the current ratio describes the ability of the company's current assets to pay off the company's current debt. The high asset liquidity of companies indicates the companies' financial health. Investors in the capital market positively respond to companies with high asset liquidity. Karim *et al.* (2021) state that if current assets are more significant than current liabilities, it shows a security guarantee or the company's short-term debt.

Omaliko *et al.* (2021) conducted a study on the impact of the COVID-19 pandemic on the liquidity and profitability of companies in Nigeria. This study found a significant difference in liquidity and profitability before and during the COVID-19 pandemic in Nigeria. Saleemi (2021) studied liquidity costs and stock returns during the COVID-19 pandemic. By limiting the analysis to the pandemic period, this study found a negative effect of liquidity cost on yields on the Dow Jones Industrial Average (DJI) index. Yassen and Omet (2021) found an increase in liquidity costs during the COVID-19 pandemic in the Jordanian Capital Market. Finally, Chebbi *et al.* (2021) found a negative effect of a pandemic on stock liquidity which affected the decline in the company's financial liquidity.

Ambarwati *et al.* (2021) tested the effect of the current ratio on company value before and during the COVID-19 pandemic in Indonesia. This study found an effect of the current ratio on firm value in the pre-pandemic period, but did not find any effect during the pandemic period. Karim *et al.* (2021) found that during the COVID-19 pandemic both conventional and Islamic banking experienced a decrease in the current ratio. Almost all banks in Bangladesh have a current ratio value of less than 1, which means that their financial condition is unfavorable.

Devi *et al.* (2020) state that the current ratio will reach a safe number if the value is above 100%. This condition shows that the company's current assets are more significant than the company's current liabilities. A pandemic is a crisis condition that causes many companies to experience liquidity problems. The economic downturn and decreased purchasing power led to an increase in the potential for bad debts and a decrease in cash. Omaliko *et al.* (2021) found the impact of the COVID-19 pandemic on the company's financial liquidity conditions. There were differences in the current ratio before and during the pandemic for companies in Nigeria. Daryanto *et al.* (2021) found a significant difference in the current ratio before and during the pandemic using four quarter data before and four quarter data during the Indonesian pandemic. Daryanto *et al.* (2021) stated that during the COVID-19 pandemic many companies experienced a decrease in the current ratio, which means that they experienced a decrease in their ability to generate cash. Based on this, researchers think that there are differences in the current ratio before and during the COVID-19 pandemic.

Based on the development of the hypothesis above, we formulate the first hypothesis as follows:

H_1: *There is a difference in the current ratio of manufacturing companies in Indonesia before and during the COVID-19 pandemic.*

Ali *et al.* (2019) state that one factor that influences the company's profitability is financial liquidity. The company's liquidity will affect the company's costs, investment growth, and company profits. The availability of cash in the company will affect the company's liquidity and profitability. Devi *et al.* (2020) researched financial performance before and during the COVID-19 pandemic in Indonesia. This study found a decline of financial performance in the form of liquidity, debt ratios, profitability, and receivable turnover during the pandemic in Indonesia. Shen *et al.* (2020) researched the negative impact of COVID-19 on the companies' performance in China. This study found a negative impact of COVID-19 on the companies listed on the China Stock Exchange in terms of a decrease in the investment scale and a decrease in income. The tourism, transportation, and catering sectors are the sectors that have been heavily affected by COVID-19 and have experienced disruptions in terms of production, operations and sales. Company managers send wrong signals to company stakeholders that affect returns.

Yameen *et al.* (2019) explain that maintaining company liquidity is an effort to minimize the company's business risk. The quick ratio is one of the financial ratios used to measure financial liquidity. Demirgüneș (2016) explains that the quick ratio becomes more conservative in measuring liquidity because this measure excludes inventory from the size of current assets. Abbas *et al.* (2021) explain that the quick ratio is a ratio that measures the project's ability to pay its short-term debt with current assets without selling inventory. Merchandise inventory is excluded from the calculation with the explanation of being the minor liquid asset and the most difficult to convert into cash in a short time, without experiencing losses.

Lowardi and Abdi (2021) explained that during the COVID-19 pandemic there was a significant decline in profitability. The company's liquidity conditions tend to decrease, but have not been significantly different in the period before the pandemic. The decline in profitability can be caused by several factors, such as a decrease in cash sales and credit sales or an increase in the company's operating costs. Mior Ahmed Shahimi *et al.* (2021) stated that they had not found any evidence of the negative impact of COVID-19 on the financial performance of companies in Malaysia. The financial difficulties experienced by the company are judged to be due to poor management compared to the effects of the pandemic. Ali *et al.* (2019) found the effect of the quick ratio on companies in Malaysia. An increase in the quick ratio will lead to a decrease in the company's profitability.

Daryanto *et al.* (2021) found a significant decrease in the quick ratio during the COVID-19 pandemic in Indonesia. Karim *et al.* (2021) explained a tendency to decrease liquidity during the pandemic. Abbas *et al.* (2021) explain that the quick ratio significantly affects the financial structure. The occurrence of a pandemic causes business activities to experience problems. Changes in the structure of current assets, excluding inventories, and changes in current liabilities, will affect the quick ratio value during a pandemic. Based on this, researchers think that there is a difference in the quick ratio before and during the COVID-19 pandemic.

Based on the development of the hypothesis above, we formulate the second hypothesis as follows:

H_2: *There is a difference in the quick ratio of manufacturing companies in Indonesia before and during the COVID-19 pandemic.*

Demirgüneș (2016) states that the cash ratio is the most conservative measure because it directly measures the availability of cash compared to short-term debt. Kontuš and Mihanović (2019) explain that the composition of the company's liquidity will depend on the amount of cash owed and other assets that can quickly turn into cash. Liquidity management has several essential roles for the company. First, liquidity is related to the speed of time between the change of assets into cash and the amount of short-term debt that the company must pay. Companies certainly want minimal costs in obtaining cash.

Kim *et al.* (1998) stated that company costs are the main factor in having cash. In addition to the cost fulfillment factor, the company has cash and cash equivalents for transaction needs. Cash and cash equivalents are the most liquid assets for a company. Some literature mentions precautionary and speculative motives as the basic theory of cash holding companies. The precautionary motive explains that the company maintains its liquidity to guard against unexpected company interests. At the same time, the speculative motive explains that the company's motivation to maintain liquidity is to gain profits on profitable investments in the future. Karim *et al.* (2021) explained that during the pandemic there was a decline in the company's cash holdings that occurred due to the company's business disruption.

Gancherka and Westerman (2018) explain that since the global financial crisis in 2007-2008 many parties have been interested in researching the importance of corporate cash holdings. Wijaya (2021) explained that the COVID-19 pandemic would make the company's policy on cash holdings significant. Lozano and Yaman (2020) explain that cash holding has a precautionary motive theory. With the precautionary motive explanation, when a company enters a pandemic phase, there is a possibility that the company will experience a decrease in cash inflows caused by a decrease in cash sales or low current asset turnover. Almeida (2021) explained that during the COVID-19 pandemic many US companies issued long-term debt to increase cash holdings. The increase in cash holdings is a form of caution and an effort to guard against increased business risks during the pandemic. Zimon (2020) explains that in a crisis the company can adopt a conservative policy by increasing the cash balance, in order to maintain the company's ongoing concern. Based on this, researchers think that there are differences in cash holdings before and during the COVID-19 pandemic.

Based on the development of the hypothesis above, we formulate the third hypothesis as follows:

H_3: *There are significant differences in cash holdings from manufacturing companies in Indonesia before and during the COVID-19 pandemic.*

➲ Research methodology

■ Research data and sample

This study examines the differences in the company's financial liquidity before and during the COVID-19 pandemic. This research was conducted on manufacturing companies listed on the Indonesian Capital Market in 2019-2020. We used financial data from 2019, before the pandemic, and from 2020 as the year the COVID-19 pandemic occurred. The Indonesian government officially confirmed the first COVID-19 case in Indonesia in early March 2020. The research data is secondary data obtained through audited financial reports and annual reports.

The research population is all manufacturing companies on the Indonesian Capital Market with a sampling technique using the purposive sampling method. Sample companies with incomplete financial data were excluded from the research analysis.

■ Research variables

The primary variable in this study is the company's liquidity. According to Kim *et al.* (1998), the company liquidity is the company's ability to meet the company's short-term debt. There are three financial ratios used in this study. The first liquidity ratio is the current ratio. The current ratio is a financial ratio that compares the company's current assets with the company's current liabilities (Durrah *et al.*, 2016). The second liquidity ratio is the quick ratio. The quick ratio is a financial ratio that compares current assets outside of the inventory divided by the company's current debt (Yameen *et al.*, 2019). The third liquidity ratio is cash holdings, which compares cash and cash equivalents with the company's total assets (Ozkan and Ozkan, 2004).

■ Data analysis technique

The data analysis technique in this study used a different paired sample test. In addition, this research also carried out data analysis, descriptive statistical analysis, and data normality tests. If the research data has a normal distribution, then the data analysis uses the *Paired sample t-test*. If the data is not normally distributed, then the analysis of the difference test is carried out using the *Wilcoxon signed rank test*.

➲ Empirical findings and discussion

■ Descriptive statistics

Based on the research data collection process, it is known that from 196 manufacturing companies listed on the Indonesian Capital Market, there are 14 companies with incomplete financial data. Therefore, they are excluded from the research data analysis process. Thus, the following table describes descriptive statistics of the financial liquidity of manufacturing companies on the Indonesian Capital Market in terms of current ratio, quick ratio and cash holdings.

Table 1. Descriptive statistics

Variable	N	Minimum	Maximum	Mean	Std. deviation
Current ratio 2019	182	0.00	13.04	2.324	2.148
Current ratio 2020	182	0.06	13.27	2.348	2.222
Quick ratio 2019	182	0.00	10.07	1.469	1.577
Quick ratio 2020	182	0.01	10.83	1.508	1.665
Cash holdings 2019	182	0.00	0.72	0.083	0.106
Cash holdings 2020	182	0.00	0.76	0.095	0.113
Valid N (list wise)	182				

Source: Researchers' data calculation.

The descriptive statistical analysis shows that the average current ratio of manufacturing companies in Indonesia before the pandemic was 2.32, while during the pandemic it was 2.34. The current ratio of manufacturing companies on the Indonesian Capital Market increased by 1.03% during the COVID-19 pandemic. The average quick ratio of manufacturing companies on the Indonesian Capital Market before the pandemic was 1.46, while during the pandemic period it was 1.50. The quick ratio of manufacturing companies on the Indonesian Capital Market increased by 2.67% during the COVID-19 pandemic. The average value of the current and quick ratios

of manufacturing companies on the Indonesian Capital Market is above 1. Referring to the criteria presented by Karim *et al.* (2021), the current ratio and quick ratio above number 1 indicate good financial conditions, especially in terms of the company's ability to meet the company's short-term debt. The average value of the cash holdings of manufacturing companies in Indonesia before the pandemic was 0.083, while during the pandemic it was 0.095. The average cash holdings of manufacturing companies on the Indonesian Capital Market increased by 13.87% during the COVID-19 pandemic.

■ Data normality test

The data normality test in this study aims to determine the distribution of research data. Table 2 below presents the results of the data normality test.

Table 2. Data normality test

Variable	Test statistic	Sig.	Description
Current ratio 2019	0.203	0.000	Data not normally distributed
Current ratio 2020	0.225	0.000	Data not normally distributed
Quick ratio 2019	0.190	0.000	Data not normally distributed
Quick ratio 2020	0.219	0.000	Data not normally distributed
Cash holdings 2019	0.217	0.000	Data not normally distributed
Cash holdings 2020	0.201	0.000	Data not normally distributed

Source: Researchers' data calculation.

Based on Table 2, it is known that the cash holdings financial ratios, current ratios, and quick ratios both before and during the COVID-19 pandemic had abnormal distributions, so that the hypothesis in this study was tested using the Wilcoxon signed rank test approach.

■ Empirical results

Table 3 below presents a ranking analysis of research data.

Table 3. Ranking data

Data		N	Mean rank	Sum of ranks
Current ratio 2020 – Current ratio 2019	Negative ranks	86[d]	92.87	7,987.00
	Positive ranks	96[e]	90.27	8,666.00
	Ties	0[f]		
	Total	182		
Quick ratio 2020 – Quick ratio 2019	Negative ranks	89[g]	88.20	7,850.00
	Positive ranks	93[h]	94.66	8,803.00
	Ties	0[i]		
	Total	182		
Cash holdings 2020 – Cash holdings 2019	Negative ranks	74[a]	81.41	6,024.00
	Positive ranks	108[b]	98.42	10,629.00
	Ties	0[c]		
	Total	182		

Source: Researchers' data calculation.

Based on the data in Table 3, it is known that for the case of manufacturing companies in Indonesia, there were 86 companies that experienced a decrease in the current ratio. In contrast, 96 companies experienced an increase in the current ratio during the COVID-19 pandemic. The liquidity ratio in the form of a quick ratio shows that 89 manufacturing companies are experiencing a decrease in the quick ratio, and 93 companies are experiencing an increase in the quick ratio during the COVID-19 pandemic. In the cash holdings ratio of manufacturing companies in Indonesia, 74 companies experienced a decrease in cash holdings, and 108 companies experienced an increase in cash holdings during the COVID-19 pandemic.

Table 4 below presents the empirical results of the Wilcoxon signed rank test.

Table 4. Wilcoxon signed rank test

	Current ratio 2020 – Current ratio 2019	**Quick ratio 2020 – Quick ratio 2019**	**Cash holdings 2020 – Cash holdings 2019**
Z	-0.477[b]	-0.670[b]	-3.235[b]
Asymp. sig. (2-tailed)	0.633	0.503	0.001

Source: Researchers' data calculation.

The results of the Wilcoxon signed rank test in Table 4 show the empirical results of testing the hypothesis of this study.

The test results on the current ratio before and during the COVID-19 pandemic obtained a *Z* value of -0.477 with a *p*-value of 0.633. The Wilcoxon signed rank test for the current ratio gave insignificant results. Therefore, hypothesis 1 is not supported, meaning there is no significant difference from the current ratio of manufacturing companies on the Indonesia Capital Market before and during the COVID-19 pandemic.

The Wilcoxon signed rank test for the quick ratio obtained a *Z* value of -0.670 with a *p*-value of 0.503. However, tests of the quick ratio before and during the pandemic did not provide significant results. Therefore, hypothesis 2 in this study is not supported, which means that there is no significant difference from the quick ratio of manufacturing companies on the Indonesian Capital Market before and during the COVID-19 pandemic.

The Wilcoxon signed rank test for cash holdings obtained a *Z* value of -3.235 with a *p*-value of 0.001. Tests of cash holdings before and during the pandemic yielded significant results. Therefore, hypothesis 3 in this study is supported, which means that there are significant differences in cash holdings in the period before and during the COVID-19 pandemic in manufacturing companies on the Indonesian Capital Market.

■ Discussion

Based on the empirical findings of this study, it is known that there is no significant difference in the current ratio before and during the COVID-19 pandemic in the case of Indonesian manufacturing companies. The results of this study do not support the research of Omaliko *et al.* (2021) and Daryanto *et al.* (2021), who found a difference in the current ratio before and during the COVID-19 pandemic. The results of this study are in line with the research of Devi *et al.* (2020), who found no difference in the current ratio before and during the pandemic. The findings of this study indicate that the average current ratio of manufacturing companies during the pandemic has increased, even though the difference is not significant. This research is not in line with Karim *et al.* (2021), which tends to decrease liquidity during the pandemic. Li *et al.* (2020) explain that companies need to take strategic steps towards securing liquidity levels for business operations and unexpected needs. If the pandemic condition becomes a very uncertain situation, it will be very logical according to Zimon (2020) that the company will increase its liquidity.

The results of testing the quick ratio before and during the COVID-19 pandemic showed no significant differences in the case of Indonesian manufacturing companies. The results of this study do not support the

research of Daryanto *et al.* (2021), who found a significant decrease in the quick ratio during the COVID-19 pandemic in Indonesia. However, the results of this study support the results of Almeida's opinion (2021), which shows a tendency to increase liquidity during the pandemic to protect against pandemic risk. This study shows that, on average, the quick ratio of manufacturing companies in Indonesia has increased, even though the number is not significantly different from the pandemic period. This condition can be understood as a conservative measure of the managers of manufacturing companies in Indonesia to secure the companies liquidity conditions during the COVID-19 pandemic in Indonesia.

The following findings in this study is that there are significant differences in cash holdings before and during the COVID-19 pandemic in the case of manufacturing companies on the Indonesian Capital Market. The average cash holding number increases on average during the pandemic period. The results of this study contradict those of Yassen and Omet (2021) and Karim *et al.* (2021), which show a decline in financial performance, including financial liquidity during the COVID-19 pandemic. However, the results of this study support the opinion of Almeida (2021) and Zimon (2020). Kim *et al.* (1998) and Almeida (2021) explain that cash is the most liquid asset. The company has cash holding in the context of the precautionary motive, which is the motive to guard against uncertain conditions in the future. A pandemic condition is a crisis condition caused by global health aspects that impact financial pressure for companies. It can be said that the risks faced by companies during this pandemic are greater than or equal to the risks during the economic and financial crisis. Many companies implement strict liquidity policies to deal with the worst possibility of pandemic risk and make efforts for this to remain an ongoing concern. The companies adopted a long-term financing policy, which increased cash holdings during the pandemic.

The second explanation from the researcher was developed by referring to the thoughts of Zimon (2020). According to Zimon, the company carries out liquidity management very conservatively in this pandemic crisis. The company does not make loose policies related to the company's working capital management. The goal is that the company should have cash safely and reduce financial difficulties. Sources of funds from third parties are also not a mainstay because third parties also face the same pandemic risk and will increase the required return on the financing provided. The most logical policy of the company is to secure the cash held at a level that is considered safe and sufficient to maintain the company's business sustainability. Bankruptcy is the leading risk faced by companies during this pandemic, and increasing cash holdings is an attempt to minimize the risk of bankruptcy.

➲ Conclusion

This study aims to compare financial liquidity before and during the COVID-19 pandemic in manufacturing companies in Indonesia. The tested financial liquidity includes three ratios: the current ratio, the quick ratio and the companies' cash holdings. Based on empirical findings, it can be concluded that there is no difference between the current ratio and the quick ratio before and during the COVID-19 pandemic. The following conclusion is that there are significant differences in the companies' cash holdings before and during the COVID-19 pandemic in the case of manufacturing companies on the Indonesian Capital Market. During the COVID-19 pandemic, manufacturing companies on the Indonesian Capital Market experienced an increase in liquidity in terms of company cash holdings due to the company's efforts to avoid bankruptcy and maintain business sustainability. As a result, managers of manufacturing companies in Indonesia adopted a more conservative policy by increasing the number of cash holdings during the pandemic.

The limitation of this study is that it only uses data one year before the onset of the pandemic and one year into the pandemic period. This condition is due to the availability of financial data reporting, which has only

been available for a certain period into the pandemic. Therefore, the long-term impact of the COVID-19 pandemic on manufacturing companies in Indonesia cannot be directly measured. Further research is recommended to extend the research period, for example, using financial data two years before and two years after the pandemic occurs, considering the availability of data on the Indonesian Capital Market. Further research is also recommended to compare the financial conditions of other companies, such as profitability, debt ratios, and company values during the COVID-19 pandemic.

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