COMPARATIVE ANALYSIS OF CASH-DRIVEN RESILIENCE DURING THE COVID-19 PANDEMIC

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ABSTRACT
This study aims to examine the comparison and differences in levels of cash-driven resilience during the normal period, the period before the COVID-19 pandemic, and the period during the COVID-19 pandemic; profitability (return on assets, profit margin, and productivity of assets) and financial constraints (liquidity and leverage) on cash-driven resilience. This research method uses the purposive sampling technique. The number of samples used in this study was 86 manufacturing companies listed on the Indonesia Stock Exchange consecutively from 2018 to 2020. The analysis used in this study was descriptive statistics, Kruskal-Wallis test, and post hoc test which was processed with the help of IBM SPSS Statistics 26 software. This study found that overall, there are significant differences in cash-driven resilience during the normal period, the period before the COVID-19 pandemic, and the period during the COVID-19 pandemic; return on assets, profit margin, liquidity, and leverage on cash-driven resilience. While, productivity of assets does not have a significant difference on cash-driven resilience.

Keywords: Cash-Driven Resilience; Financial Performance; Financial Constraints

1. INTRODUCTION

The company's resilience is being tested for resilience to adapt and recover from the COVID-19 pandemic. Organization *resilient* not only survives, but also thrives in an environment of change and uncertainty. The ability to recover is determined by the dynamic capabilities of the organization, in this case how the company manages the level of *cash holdings*. *Cash holdings* are used to estimate resilience *capabilities in* terms of readiness, adaptability, and recovery from the consequences faced in COVID-19. *Cash-driven resilience* is shown by companies that have cash resources and are able to become supporters from time to time.

Cash resources owned by the company play an important role in the continuity of the company's business. Companies have several motives for keeping cash for transactions, precautionary, and speculative to avoid costs to obtain funds from external parties. The motive for speculating is done to get potential income. Finally, the transaction motive is carried out to ensure the company can pay and carry out its operational activities, the precautionary motive is carried out to deal with uncertain situations such as the COVID-19 pandemic.

The whole world is facing the COVID-19 pandemic, the future cash flow of companies is affected and simultaneously increases the risk of default in reference [1]. The shock resulting from the COVID-19 pandemic increased liquidity risk for many companies and resulted in an unprecedented increase in liquidity demand for affected companies as seen in [2]. The availability of cash and the company's ability to manage it influences the liquidity and shows the company's ability to meet all its obligations in a timely manner in order to stay afloat.

Our Contribution

The purpose of this study is to examine the level of differences in the categories of cash-driven resilience (non-resilient, perspective for resilience, uncertain resilience, and resilience) in the normal period, the period before the COVID-19 pandemic, and the period during the COVID-19 pandemic; financial performances (return on assets, profit margin, and productivity of assets) and financial constraints (liquidity and leverage) on cash-driven resilience. This research is expected to help management to find out which category is in cash-driven resilience and assist management in determining the optimal level of cash holdings. Also, to help investors make decisions before investing in a company during the COVID-19 period by paying attention to the company's resilience in assessing the cash-driven resilience and sustainability of the company.

2. BACKGROUND

In trade-off theory, according to [3], a firm can consider the optimal level of cash holdings. Proponents of the trade-off believe that the firm's level of cash holdings depends on the trade-off between the marginal cost of cash shortage and the marginal cost of cash holdings as demonstrated in [4] or by comparing the marginal cost of keeping cash with the marginal benefit of holding cash. The benefits of holding cash are supported by the precautionary motive of the trade-off model, which states that holding cash helps firms to avoid financial difficulties, and holding cash reserves also allows them to seize profitable investment opportunities as seen in [5].

In agency theory, according to [6], companies represent a group of parties with different relationships, consisting of shareholders, management, employees, and stakeholders. This is one of the main causes of conflicts of interest that can encourage company management to disclose information that satisfies their interests. The management can disclose information that shows the company's success and high income because the reason is that management awards are often associated with the results of its performance and certain standards. Meanwhile, shareholders, potential investors, and other interested parties have an interest in obtaining positive or negative information about the actual state of the company. Hence, the management holds on to cash to gain flexibility in the investment decisions of the company by increasing the number of assets under their control. By holding more cash in current assets, there is no need to raise funds for every investment opportunity and managers have flexibility in decision-making and can invest in investments even if it has a negative impact on shareholder wealth.

Cash-Driven Resilience

Definition 1. (Cash-Driven Resilience) According to [7] they are divided into four categories as shown in Figure 1 by combining the accumulation or consumption of cash holdings with dynamic capabilities positive or negative. The first section (A) shows organizations that can be considered as resilient. The company is distinguished by a high level of cash holdings and exhibits dynamic capabilities in generating cash. The second part (B) is also cash holders but has dynamic capabilities negative cash holdings, which means it consumes existing cash. Thus, these organizations are considered as organizations with uncertain resilience. The third and fourth sections (C and D) show that the organization has cash low or no holdings. If their

dynamic capabilities are positive cash holdings, the organization can be classified as having perspectives for resilience (C). However, if this organization cannot increase its cash holdings, it is non-resilient (D).
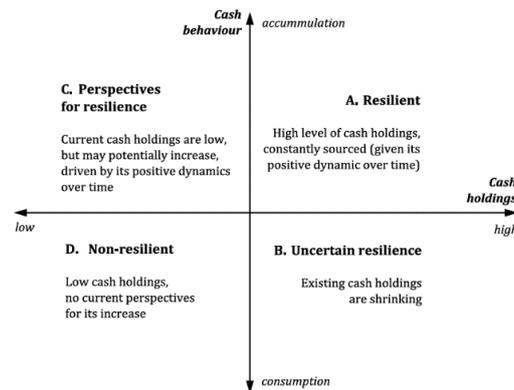

Figure 1 Conceptual Model of Evaluation of Cash-Driven Resilience Capabilities

The COVID-19 pandemic in this study was considered a nuisance. The impact of COVID-19 pandemic has had a severe impact, both on a national and international scale. The spread of the global COVID-19 pandemic has led to drastic measures being taken by countries around the world, including border closures, bans on mass events, site and travel closures. From a business perspective, these measures resulted in an unprecedented and catastrophic drop in demand. In this case, the likelihood of the impact of the COVID-19 pandemic is uncertain, but the maximum degree of damage is high. However, the COVID-19 pandemic is also having an unprecedented impact and testing the resistance of businesses as a whole. The outbreak of the COVID-19 pandemic has also disrupted various business performances, giving rise to symptoms of an economic crisis that are worrying various economic actors. Figure 2 illustrates the function of cash holdings in the resilience stage, by combining the concept of organizational resilience and the function of financial slack availability (in this study it is cash holding). While carrying out normal operational activities of the organization without any disruption, the organization prepares for any potential disruptions that may arise in the future (keeping cash). This period is used to develop dynamic capabilities by increasing financial slack.

The outbreak of the COVID-19 pandemic was a disruption to normal operational activities. The sudden decline in the performance capabilities of the organization is in the absorption stage. Furthermore, after reaching the peak of the negative impact of the disturbance, the recovery phase begins. In the absorption and recovery phase, the focus of the organization is to minimize the impact of declining performance.

Financial slack has an important role in the absorption and recovery stages. Cash holdings are available to help find cash inflows due to decreased demand for products and services. The higher the cash holdings, the greater the ability for recovery, and the possibility to get to the adaptation stage as seen in [7].
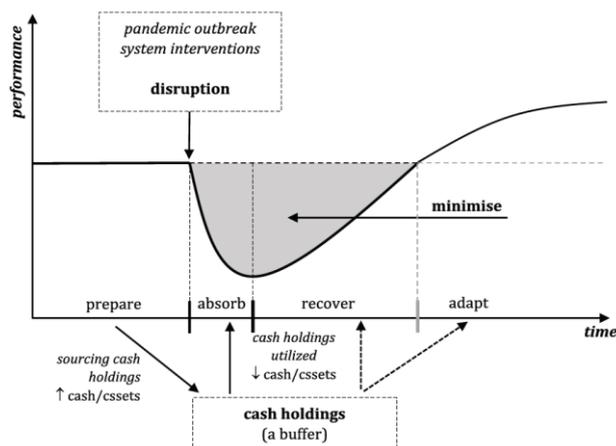
Figure 2 Cash Holdings Function at Resilience Stage

[8] found that there were significant differences in the level of cash holdings before and after the COVID-19 pandemic. This is supported by the motive of holding cash, which is a precautionary motive where the company must survive in the COVID-19 pandemic. Companies need funds to continue operating, while during the COVID-19 pandemic, external funds are more difficult to obtain compared to normal periods and must be on guard for a decline in sales and revenue. As demonstrated in [7] a third of companies are in the non-resilient category, and the resilience perspective exceeds the number of resilient companies. Cash-driven resilience is at a low level. However, the situation improved slightly in 2019 as the pre-COVID-19 period. The percentage of non-cash holders is higher than that of cash holders. Given that the ability to raise cash over time is determined by the dynamics of cash holdings, the combined impact of cash holdings and cash behavior indicates the company's low ability to withstand the financial crisis caused by the COVID-19 pandemic. Meanwhile, according to [9] there was a decrease in the level of cash holdings during the financial crisis period. The financial crisis was a surprise to management because it increased uncertainty and limited companies' access to external financing.

According to the theory of motives for holding cash, there are three motives, namely transaction motives, precautionary motives, and speculation motives. The transaction motive arises because the company needs cash to finance its daily operational activities. Second, the precautionary motive is carried out by the company to anticipate uncertain future events, in this situation is the COVID-19 pandemic which is a situation that encourages companies to increase cash holdings to continue to operate. Finally, the motive for speculation is done to be able to take the opportunity to develop a business. The main impact of the COVID-19 outbreak is a decrease in the demand for products and services due to a decrease and even loss of customers, which causes a decrease in cash inflows from sales. This would lead to liquidity tensions and increase the threat of bankruptcy. Thus, the ability of a business to be able to survive and fight the difficulties caused by the pandemic is determined by the ownership of financial slack available, in this case is cash holding. Therefore, based on this framework, the first hypothesis is formulated as follows:

H_1: There are significant differences in cash-driven resilience (non-resilient, perspective for resilience, uncertain resilience, and resilience) during the normal period, the period before the COVID-19 pandemic, and the period during the COVID-19 pandemic.

Financial Performance

Definition 2. (Financial Performance) According to [10] financial performances show the results and overall financial health of the company during the period. certain time. Performance measurement used in this research are financial ratios, namely: return on assets, profit margin, and productivity of assets. Return on assets is one of the most basic measures of business success in generating profits [11]. Profit margin provides information on how well the company's management generates profits from its main operational activities, compared to the company's overall activities [12]. Productivity of assets shows how efficiently it generates sales by utilizing assets owned by the company [11].

Good financial performances indicate greater recovery slack because it can generate internal funds that have the potential to become a source of cash holdings in the future. According to [7] that companies in the resilience and uncertain resilience categories had higher levels of financial performance (return on assets, profit margins, and productivity of assets) than companies in the perspective of resilience and non-resilient categories. This indicates that companies that fall into the resilience and uncertain resilience categories are more able to get cash to improve resilience capabilities. However, these findings are inconsistent with research by [13] that the number of cash holdings can decrease with increasing company profitability because the need to keep cash reserves decreases with increasing profitability. Access to capital markets for financing is made easy with increased profitability, reducing the need to hoard cash.

Companies with high returns on assets will store large amounts of cash. The greater the company's ability to generate profits, the greater the amount of cash the company has because the number of sales is high. The increase in sales from year to year reflects the company's good performance and high-income levels. Companies with a high return on assets and profit margins reflect the company's profitability can increase cash reserves in the company. Profitability, is sensitive to decreased sales (due to loss of customers) and increased operating costs. This aspect is related to the concept of recovery slack. In general, better profitability indicates greater recovery slack because this business can generate internal funds that have the potential to become a source of cash holdings in the future. Therefore, based on this framework, the second hypothesis is formulated as follows:

H_{2a}: There is a significant difference in return on assets for cash-driven resilience (non-resilient, perspective for resilience, uncertain resilience, and resilient)

H_{2b}: There is a significant difference in profit margin for cash-driven resilience (non-resilient, perspective for resilience, uncertain resilience, and resilient)

H_{2c}: There is a significant difference in the productivity of assets in cash-driven resilience (non-resilient, perspective for resilience, uncertain resilience, and resilient)

Financial Constraints

Definition 3. (Financial Constraints) The definition of financial constraints according to [14] financial constraints are the differences in the opportunity costs of internal funding and external funding, the greater the difference in costs, the more likely the company will experience financial constraints. The financial constraints used in this study are leverage and liquidity. According to [15] "Current Ratio is a measurement used to evaluate a company's liquidity and ability to pay the short-term debt." Leverage is generally used to measure risk [11].

Loss of sales and associated cash flow decline due to the COVID-19 Pandemic ultimately led to liquidity strains and financial constraints. [7] found that companies with a level of financial constraint where the liquidity variable has high liquidity and the leverage variable have low financial constraints are in the resilience and uncertain resilience categories, which means companies that have high cash holdings, have good liquidity and financial constraints. Lower for securing a financial position and mitigating the risk of bankruptcy than companies that are included in the perspective for resilience and non-resilient categories. The results of this study are in line with research conducted by [16]. Research conducted by [13] found that during the crisis period and after the crisis, the amount of debt increased compared to normal conditions and before the crisis. Companies with higher debt levels may also have a greater ability to raise external funds, which may result in less cash being held by the company. This indicates that companies rely more on using external funds than cash.

Companies around the world are facing the COVID-19 pandemic crisis. Prior to the COVID-19 pandemic, companies that could easily get funds from external parties and supported by low transaction fees were less likely to keep large amounts of cash. However, due to the COVID-19 pandemic, the company experienced a decline and lost sales and cash flow. Not only companies, but all economic agents also face many problems and make external financing more expensive and difficult to obtain. This can cause companies to experience financial constraints because without cash reserves and difficulties in accessing external financing can make operational activities stop until there is a default. This is unavoidable in the COVID-19 pandemic and could eventually lead to liquidity strains and financial constraints. Some companies were forced to close, but some remained. On the other hand, companies that are less dependent on external financing tend to save cash. The company's operational activities can run normally with cash reserves that have been saved and can avoid financial constraints in the COVID-19 pandemic. Therefore, based on this framework, the third hypothesis is formulated as follows:

H_{3a}: There is a significant difference in liquidity on cash-driven resilience (non-resilient, perspective for resilience, uncertain resilience, and resilient)

H_{3b}: There is a significant difference in leverage for cash-driven resilience (non-resilient, perspective for resilience, uncertain resilience, and resilient)

3. METHODS

This study uses a quantitative descriptive method. The data of this research is secondary data with the population of this research are financial reports and annual reports of manufacturing companies listed on the Indonesia Stock Exchange (IDX) during 2018 to 2020. which are located on the https://www.idx.co.id/ site. The sampling technique used in this research is purposive sampling technique. The sampling criteria in this study were: (1) manufacturing companies listed in a row in the basic and chemical industries, various industries, and consumer goods industries on the Indonesia Stock Exchange (IDX) during the 2018-2020 period, (2) companies that conducted an IPO before 2018, (3) Manufacturing companies that use Rupiah (IDR) currency, (4) Companies that publish financial reports consistently during the 2018-2020 period, (5) Manufacturing companies consistently present financial statements ending on December 31, and (6) Manufacturing companies with complete data for use in this study during the 2018-2020 period. Data analysis was carried out with the help of SPSS Statistics 26 software. This study uses descriptive statistical tests, non-parametric Kruskal Wallis tests, and post-hoc tests.

Table 1 The Summary of Operational Variable

Variable	Size	Scale
Cash-Driven Resilience (CDR)	(1) Non-resilient (NR), if cash non-holders and cash consumption (2) Perspectives for Resilience (PR), if cash non-holders and cash accumulation (3) Uncertain Resilience (UN), if cash holders and cash consumption (4) Resilient (R), if cash holders and cash accumulation	Nominal
Return on Assets (ROA)	$\dfrac{\text{Net profit (loss)}}{\text{Total Asset}}$	Ratio
Profit margin (PM)	$\dfrac{\text{Net profit (loss)}}{\text{Sales Revenue}}$	Ratio
Productivity of Asset (PA)	$\dfrac{\text{Sales Revenue}}{\text{Total Asset}}$	Ratio
Liquidity (LIQ)	$\dfrac{\text{Current Assets}}{\text{Current Liabilities}}$	Ratio
Leverage (LEV)	$\dfrac{\text{Total Liabilities}}{\text{Total Asset}}$	Ratio

4. FINDINGS AND DISCUSSIONS

Table 2 shows the results of descriptive statistical tests for each variable in this study. For the amount of research data used in this study, it can be seen from the observation column, which shows that the amount of data that meets the sample criteria and can be used in this study is 258 data during the 2018 – 2020 period.

he cash-driven resilience (CDR) variable based on a sample of 258 data has a minimum value of 1 out of 94 companies, a maximum value of 4 out of 53 companies, a median value of 2, the average value is 2.193798 where the average value is closer to 2 so that the average company is at the perspective for resilience level where the cash holdings level is low but still has the potential to increase the cash holdings level over time, and the standard deviation value is 1.140534.

The return on asset (ROA) variable based on a sample of 258 data has a minimum value of -1.049839, a maximum value of 0.920997, a median value of 0.03031, an average value of 0.033834 or 3.38%, which means the company generates an annual net profit of 3.38% of its total assets, and the standard deviation value is 0.128676.

Profit margin (PM) variable based on a sample of 258 data has a minimum value of -7.84657, a maximum value of 155.4432, a median value of 0.034167, an average value of 0.551761 or

55.18%, which means that on average the company generates revenue of 55.18% from its sales, and the standard deviation value is 9.707237.

The productivity of assets (PA) variable based on a sample of 258 data has a minimum value of 0.000443, a maximum value of 2.863919, a median value of 0.864564, an average value of 0.92891 or 92.89%, which means the company's ability to generate sales using its total assets is 92.89%, and the standard deviation value is 0.475823.

The liquidity variable (LIQ) based on a sample of 258 data has a minimum value of 0.021358, a maximum value of 13.04157, the median value is 1.577922, the average value is 2.128451 which means the company's average liquidity is very high, so it is quite safe and able to finance or pay off its short-term debt with its current assets, and the standard deviation value is 1.826936.

The leverage variable (LEV) based on a sample of 258 data has a minimum value of 0.066532, a maximum value of 1.988846, the median value is 0.480774, the average value is 0.486641 or 48.66%, which means that on average the company has a total debt of 48.66% of its total assets, and the standard deviation value is 0.230451.

Table 2 Descriptive Statistics Results

	N	Mean	Median	Max	Min
CDR	258	2.193798	2	4	1
ROA	258	0.033834	0.03031	0.920997	-1.049839
PM	258	0.551761	0.034167	155.4432	-7.84657
PA	258	0.92891	0.864564	2.863919	0.000443
LIQ	258	2.128451	1.577922	13.04157	0.021358
LEV	258	0.486641	0.480774	1.988846	0.066532

The average ranking results in Table 3 show that in 2018 and 2019 the majority of companies were not ready to face the COVID-19 pandemic with the non-resilient category having the highest number compared to other categories. The COVID-19 pandemic is an unexpected event where many do not expect the impact to be so large on the company's operational activities. Companies that fall into this category have a low level of cash holdings and continue to decline. However, in 2020 there were fewer non-resilient categories compared to the previous year.

Based on the average ranking results in Table 4 Companies that are in the resilient category show a high level of cash holdings compared to the industry average and the company's ability to increase its cash holdings level. And the Uncertain Resilience category means that it shows a high level of cash holdings compared to the industry average, but the company experiences a decrease in the level of cash holdings or does not have the ability to increase the level of cash holdings. This shows that companies that are categorized as resilient and uncertain resilience have higher levels of profitability and liquidity.

The perspective for resilience category shows a low level of cash holdings compared to the industry average, but the company still has the ability to increase its cash holdings level. And the non-resilient category shows the level of cash holdings is low compared to the industry average and the company has decreased in the level of cash holdings or does not have the ability to increase the level of cash holdings. This shows that companies that fall into the

perspective for resilience and non-resilient categories have lower levels of profitability and higher financial constraints

Table 3 Mean Rank Results for Cash-Driven Resilience

	N	2018	2019	2020
CDR	258	128.84	113.65	146.02

Table 4 Mean Rank Results for Financial Performance and Financial Constraints

	ROA	PM	PA	LIQ	LEV
NR	109.59	112.26	116.39	102.67	152.37
PR	116.62	111.73	126.07	105.82	152.68
UR	160.71	164.61	141.24	182.05	80.42
R	160.19	159.40	149.06	172.02	92.19

Based on Table 5, variable cash-driven resilience (CDR) has an Asymp value. Sig of 0.012 which means it has a significant difference because of $H_0 < 0.05$. So, the results of the Kruskal Wallis test reject H0 and accept H_1. Because the cash-driven resilience (CDR) variable rejects H_0, it must be continued with a post hoc test to find out where there is a significant difference.

The financial performance variable, namely return on assets (ROA) has an Asymp value. Sig of 0.000, profit margin (PM) has an Asymp value. Sig of 0.000. So, the results of the Kruskal Wallis test reject H_0 and accept H_{2a} and H_{2b}. Because return on asset (ROA) and Profit Margin (PM) variable rejects H_0, it must be continued with a post hoc test to find out where there is a significant difference. While the productivity of assets (PA) variable does not have a significant difference because it has an Asymp value. Sig is 0.054, or $H_0 > 0.05$. So that the final result of the Kruskal Wallis test rejects H_{2c} and accepts H_0. Therefore, for the productivity of assets (PA) variable, it is not necessary to do a post hoc test.

The financial constraints variables, namely liquidity (LIQ) and leverage (LEV) each have an Asymp value. Sig of 0.000 which means it has a significant difference because $H_0 < 0.05$. So, the results of the Kruskal Wallis test rejected H_{3a} and H_{3b}. Because the variables of liquidity (LIQ) and leverage (LEV) reject H_0, it must be continued with a post hoc test to find out where there are significant difference

Table 5 Kruskal-Wallis Test Results

	CDR	ROA	PM	PA	LIQ	LEV
KW	8.835	24.482	26.078	7.634	55.555	45.565
Df	2	3	3	3	3	3
A	0.012	0.000	0.000	0.054	0.000	0.000

Cash-driven resilience is divided into four categories according to resilience capabilities. So, the post hoc test is carried out by examining the differences between the categories of non-resilient and perspective for resilience, non-resilient and uncertain resilience, non-resilient and resilient, perspective for resilience and uncertain resilience, perspective for resilience and resilience, as well as uncertain resilience and resilience presented in table 6.

The cash-driven resilience (CDR) variable from 2018 to 2019 has a probability value of 0.490, which means 0.490>0.05, so there is no significant difference between cash-driven resilience (CDR) from 2018 to 2019. For 2018 to 2019. 2020 has a probability value of 0.009, which means $0.009 < 0.05$, so there is a significant difference between cash-driven resilience (CDR) from 2018 to 2020. Finally, for 2019 to 2020 it has a probability value of 0.345, which means 0.345>0.05, so there is no significant difference between cash-driven resilience (CDR) from 2019 to 2020.

There is no significant difference in return on asset (ROA) because of the Asymp value. Sig > 0.05 between the non-resilient and perspective for resilience categories which have Asymp values. Sig of 1.0000 as well as uncertain resilience and resilience have an Asymp value. Sig of 1.0000. Meanwhile, the non-resilient and uncertain resilience categories have an Asymp value. Sig of 0.0400, non-resilient and resilient has an Asymp value. Sig of 0.0000, perspective for resilience and uncertain resilience has an Asymp value. Sig of 0.0600, perspective for resilience and resilience has an Asymp value. Sig is 0.000 so there is a significant difference because all comparisons in this category have an Asymp value. Sig < 0.05.

There is no significant difference in profit margin (PM) because of the value of Asymp. Sig > 0.05 between the non-resilient and perspective for resilience categories which have Asymp values. Sig of 1.0000 as well as uncertain resilience and resilience have an Asymp value. Sig of 1.0000. Meanwhile, the non-resilient and uncertain resilience categories have an Asymp value. Sig of 0.0000, non-resilient and resilient has an Asymp value. Sig of 0.0000, perspective for resilience and uncertain resilience has an Asymp value. Sig of 0.0000, perspective for resilience and resilience has an Asymp value. Sig is 0.100 so there is a significant difference because all comparisons in this category have an Asymp value. Sig < 0.05.

There is no significant difference in the liquidity (LIQ) variable because of the Asymp value. Sig > 0.05 between the non-resilient and perspective for resilience categories which have Asymp values. Sig of 1.0000 as well as uncertain resilience and resilience have an Asymp value. Sig of 1.0000. Meanwhile, the non-resilient and uncertain resilience categories have an asymp sig value of 0.0000, non-resilient and resilient have an Asymp value. Sig of 0.0000, perspective for resilience and uncertain resilience has an Asymp value. Sig of 0.0000, perspective for resilience and resilience has an Asymp value. Sig is 0.000 so there is a significant difference because all comparisons in this category have an Asymp value. Sig < 0.05.

There is no significant difference in the leverage variable (LEV) because of the Asymp value. Sig > 0.05 between the non-resilient and perspective for resilience categories which have Asymp values. Sig of 1.0000 as well as uncertain resilience and resilience have an Asymp value. Sig of 1.0000. Meanwhile, the non-resilient and uncertain resilience categories have an asymp sig value of 0.0000, non-resilient and resilient have an Asymp value. Sig of 0.0000, perspective for resilience and uncertain resilience has an Asymp value. Sig of 0.0000, perspective for resilience and resilience has an Asymp value. Sig is 0.000 so there is a significant difference because all comparisons in this category have an Asymp value. Sig < 0.05.

Overall, all variables have the same result, namely, there is no significant difference between the non-resilient and perspective categories for resilience and uncertain resilience and

resilience. Meanwhile, the categories for non-resilient and uncertain resilience, non-resilient and resilient, perspectives for resilience and uncertain resilience, and perspectives for resilience and resilience have significant differences

Table 6 Post-Hoc Test Results

Post-Hoc Test	CDR	ROA	PM	LIQ	LEV
2018-2019	0.490				
2018-2020	0.009				
2019-2020	0.345				
NR-PR		1.000	1.000	1.000	1.000
NR-UR		0.000	0.002	0.000	0.000
NR-R		0.002	0.002	0.000	0.000
PR-UR		0.007	0.001	0.000	0.000
PR-R		0.019	0.002	0.000	0.000
UR-R		1.000	1.000	1.000	1.000

The results of statistical analysis for H_1 are accepted because this study found that there were significant differences in cash-driven resilience in the normal period, the period before the COVID-19 pandemic, and the period during the COVID-19 pandemic. The manufacturing industry's resilience in the face of the financial crisis due to the COVID-19 pandemic is low, but the company is still able to survive during the COVID-19 pandemic. This indicates that companies that are ready and able to survive the COVID-19 pandemic are companies that are included in the resilient category, namely companies with cash holdings levels above the industry average and have the ability to increase their cash holdings. The results of this study are in line with research conducted by [7] [8] [13] [16] but not in line with the results of [6].

The results of statistical analysis for H_{2a} and H_{2b} are accepted because there are significant differences in cash-driven resilience on financial performance (return on asset and profit margin) but H_{2c} are rejected because there are no significant differences in cash-driven resilience on productivity of asset. It indicates that companies with high levels of return on assets and profit margins are in the uncertain resilience and resilient category. This means that companies that have a higher level of profitability have better resilience, have a high level of cash holdings, and can continue to increase their cash. However, there were no significant differences in financial performance (productivity of assets) variables in cash-driven resilience. The results of this study are in line with research conducted by [7] but the results of this study are not in line with research by [13].

The results of statistical analysis for H_{3a} and H_{3b} are accepted because there are significant differences in cash-driven resilience on financial constraints (liquidity and leverage). The high liquidity variable is in the category of resilient and uncertain resilience. This confirms that a good liquidity position indicates better resilience, has a high level of cash holdings and can continue to increase its cash holdings to meet the company's short-term obligations. The high leverage variable is in the perspective of resilience and non-resilient categories. This means that companies whose assets are mostly financed by debt tend to have lower resilience, lower levels of cash holdings, and decreased levels of cash holdings. The results of this study are in line with research conducted by [7] [8] but the results of this study are not in line with research by [13].

5. CONCLUSIONS

Based on the results of data analysis, it can be concluded that there are significant differences in cash-driven resilience in the normal period, the period before the COVID-19 pandemic, and the period during the COVID-19 pandemic; significant differences in financial performance and financial constraints on cash-driven resilience.

This study has several limitations as follows: This research is only limited in examining the variables of cash-driven resilience, return on assets, profit margins, productivity of assets, liquidity, and leverage, this means narrowing the scope of research on the determinants other business-relevant resilience to the consequences of the COVID-19 pandemic. Based on the limitations of the research mentioned above, it is hoped that further research can carry out: Subsequent research can add other determinants of resilience variables that are relevant to businesses to face the consequences of the COVID-19 pandemic.

Suggestion for the company's internal parties, namely the company's management, it is hoped that the results of this study can be considered in setting strategies to maximize revenue in order to have a high level of cash holdings. The high level of cash holdings is indicated by the resilient and uncertain resilience categories as well as the ability to increase the number of cash holdings, indicating that the company is in the resilient category. So that the company's management is expected to produce high profitability, a good level of liquidity, and does not depend on the use of debt.
Also, for investors who use the company's financial statements, it is hoped that this research can help add insight in making decisions before investing in a company during the COVID-19 pandemic by paying attention to the company's cash-driven resilience so that they can estimate and assess resilience and company sustainability, to avoid investing in companies that are having difficulty dealing with the COVID-19 pandemic. Such as companies that are in the non-resilient category have cash holdings levels below the average and the number continues to decline.

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