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Financial Distress in Consumer Cyclicals: How Liquidity and Operating Cash Flow Shape Resilience

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Abstract

Financial distress poses a significant risk to companies, particularly during periods of economic uncertainty, as it can lead to operational disruption, loss of investor confidence, and potential bankruptcy. This study aims to examine the effects of liquidity and operating cash flow on financial distress, with firm size as a moderating factor. The research employs a quantitative approach using a logistic regression model on data from consumer cyclical companies publicly listed on the *Indonesia Stock Exchange* between 2019 and 2023. The results indicate that higher liquidity and stronger operating cash flow significantly reduce the likelihood of financial distress. Additionally, firm size moderates the relationship between liquidity and financial distress, attenuating its negative impact, which suggests that liquidity plays a less crucial role for larger firms in mitigating financial distress. Conversely, firm size does not significantly moderate the effect of operating cash flow on financial distress. These findings highlight the importance of maintaining adequate liquidity and robust operating cash flow, particularly for smaller firms with limited financial flexibility. Practically, the study suggests that managers of smaller companies should prioritize liquidity management and operational efficiency to prevent financial distress, while policymakers may consider firm size when designing supportive financial regulations. The study contributes to the literature by clarifying how liquidity and cash flow interact with firm size to influence financial stability in emerging markets like Indonesia.

Keywords: Consumer Cyclicals; Financial Distress; Firm Size; Liquidity; Operating Cash Flow

INTRODUCTION

The global economic slowdown triggered by the COVID-19 pandemic has had a significant impact on Indonesia's financial landscape. Indonesia recorded a negative economic growth rate of 2.07% in 2020 (Menteri Keuangan, 2021), marking one of the sharpest declines in recent decades. This contraction disrupted various sectors, especially those that are heavily dependent on consumer spending. One of the vulnerable sectors is the consumer cyclicals sector, which includes industries such as retail, automotive, and leisure that are highly sensitive to changes in consumer confidence and disposable income. A decline in people's purchasing power, changes in consumption behavior, and mobility restrictions have put pressure on the financial resilience of companies in this sector.

In the midst of these challenges, many companies are having difficulty maintaining their liquidity and solvency, which increases the risk of financial distress. Financial distress is generally defined as a condition in which a company is unable to meet its short-term and long-term financial obligations. In extreme cases, this can lead to bankruptcy or delisting from the stock exchange (Kristanti & Pancawitri, 2024). Previous cases of company delisting show that unresolved financial problems can develop into company failure. To prevent this, companies must actively monitor key financial indicators such as liquidity and operating cash flow, which serve as early

warning signals against deteriorating financial conditions (Bui & Thach, 2023; Septyanto et al., 2022). Understanding the role of these indicators, especially in the volatile consumer cyclicals sector, is critical in formulating financial sustainability strategies amid uncertain economic conditions.

The consumer cyclicals sector is one of the most dynamic and economically sensitive, encompassing companies that produce and offer non-essential goods and services—such as fashion, automotive products, hospitality, entertainment, and retail. Based on the *IDX-Industrial Classification* (*IDX-IC*) classification from the *Indonesia Stock Exchange* (*IDX*), this sector has shown stable growth in recent years. The number of companies recorded increased from 132 in 2021 to 154 in 2023, reflecting the high interest of investors and the sector's role in supporting Indonesia's post-pandemic economic recovery.

Nevertheless, despite its growth, the sector is particularly vulnerable to economic slowdowns and changes in consumer demand. The impact of the COVID-19 pandemic has highlighted this vulnerability, especially in sub-sectors such as hospitality and textile manufacturing that are experiencing significant financial pressures. Data from *Statistics Indonesia* (*BPS*) shows that the textile and garment sub-sector, which previously accounted for 5.64% of the manufacturing sector's GDP, contracted in early 2023. One prominent example is *PT Sri Rejeki Isman Tbk* (*Sritex*), which faced serious liquidity problems, failed to meet short-term obligations, and was threatened with being delisted from the stock exchange.

The suspension stemmed from short-term debt defaults, which as of December 2020 reached US$ 398.35 million, while the company's cash and cash equivalents were only US$ 187.6 million. As a result, *SRIL* is facing the *Debt Payment Obligation Suspension* (*PKPU*) process, and the *IDX* has warned of potential delisting. In 2022, *SRIL's* total liabilities reached US$ 1.5 billion, while its total assets were only US$ 764.55 million, indicating deteriorating financial conditions (Adventy, 2023). In the first half of 2023, *Sritex* experienced negative capital or an equity deficit due to a much larger amount of liabilities than assets. This condition puts *SRIL* on the verge of bankruptcy because if the debt becomes due and remains unpaid, even the sale of all assets will not be enough to cover all liabilities. *SRIL's* total liabilities in the period reached US$ 1.57 billion or around Rp 23.8 trillion, while its total assets were only US$ 707.43 million or Rp 10.75 trillion. As a result, *SRIL* recorded a capital deficit of US$ 707.46 million or around Rp 10.7 trillion. The large long-term debt burden, especially from bank loans and bond issuance, further aggravated the company's financial condition. In the first half of 2023, *SRIL's* bank and bond debt reached US$ 1.3 billion or equivalent to *IDR* 19.82 trillion, with details of bank debt of US$ 935.67 million or *IDR* 14.22 trillion and bonds of US$ 368.25 million or *IDR* 5.6 trillion (Aprilia, 2023).

Financial distress, which is often described as a condition of deteriorating financial health that can lead to bankruptcy, has become a growing concern for companies (Kristanti, 2019). Early identification of these conditions is essential to minimize risk, maintain company value, and maintain investor confidence. One of the commonly used tools for detecting financial distress is the *Altman Z-score* model, which uses a variety of financial ratios to assess a company's financial stability. The *Altman Z-score* is an indicator to measure the potential for bankruptcy of a company

using the ratio of liquidity, profitability, economic profitability, activity efficiency, and market valuation (Setiawan, 2021). Based on (Altman, 2013), a company is categorized as healthy (green area) if it has a discriminating value of 2.99 or more. If the discriminant value is between 1.81 and 2.99, the company is in the unhealthy category but not yet in an emergency (grey area). However, if the discriminatory value is less than 1.81, the company is classified as being in a condition of financial distress (red area).

The theoretical framework of this study encompasses signaling theory, used to explain how a company communicates its financial condition through the main financial indicators in this study. The signaling theory describes how the company signals to external parties such as investors to convey important information about the company's financial condition and prospects (Brigham & Houston, 2021). If a company shows signs of financial difficulties, investors can interpret it as a signal that the company has high risk, so they become more cautious in making investment decisions. Strong liquidity and positive cash flow are interpreted as positive signals by investors and lenders that indicate financial resilience (Sari & Kristanti, 2024). Conversely, weak financial performance can be a warning that has the potential to erode market confidence and access to capital.

Previous studies have identified several key factors that affect financial distress, with liquidity and operating cash flow often mentioned. Liquidity indicates the company's ability to meet short-term liabilities calculated using the current ratio that measures the relationship between a company's current assets and current debt (Hayati & Sholichah, 2022). A ratio that is too low can indicate that the company is experiencing liquidity difficulties, potentially facing financial problems such as default on operational obligations, including employee salary payments, accounts payable, and other operating expenses. A low current ratio can also give a negative signal to investors and creditors that the company has high risks in working capital management. This can lead to a decrease in market confidence, difficulty obtaining additional funding, and a potential decline in stock prices. In the long run, this condition can cause companies to experience greater financial pressure, even leading to bankruptcy if not immediately addressed through better financial management strategy. Research conducted by Archanskaia et al. (2023) and Szymczyk et al. (2022) shows that liquidity has a negative effect on the financial distress of companies that have sufficient liquidity reserves to meet their short-term obligations and maintain operational continuity amid economic pressures due to the COVID-19 pandemic. Conversely, companies that run out of liquidity become more vulnerable to financial crises, increasing the risk of experiencing financial distress, especially in the most affected sectors.

Operating cash flow is the cash flow generated from the company's operational activities, which is used to pay the company's obligations while evaluating the quality of the profits obtained (Fitri & Dillak, 2020). High operating cash flow provides a positive signal that the company has strong operational performance and can finance its activities without dependence on external funding sources. Conversely, low or negative operating cash flow can be a negative signal indicating potential financial difficulties and increasing the risk of financial distress (Ariqoh & Yuniningsih, 2022). Research by Phan et al. (2022) shows that operating cash flow has a negative

effect on financial distress, where the higher the operating cash flow, the less likely a company is to experience financial distress.

Another factor that may affect this relationship is firm size. Larger companies typically have wider access to financing, operational efficiency, and a stronger market position, which can protect them from financial distress. In contrast, small companies are generally more vulnerable to financial shocks due to limited resources. The potential for company size in moderating the relationship between liquidity, operating cash flow, and financial distress has not been widely explored, especially in the context of developing countries such as Indonesia. Research by Ramadani & Ratmono (2023) and Mujiani & Jum'atul (2020) shows that company size has an important role in strengthening the relationship between financial factors and the potential for financial distress. Companies with larger sizes generally have wider access to external funding sources and better financial stability, making them better able to cope with liquidity pressures and bankruptcy risks than smaller companies. In this context, company size serves as a moderating variable that reinforces the influence of liquidity and operating cash flow on financial distress. Large companies with high operating liquidity and cash flow tend to have a greater ability to survive financial pressures because they are supported by more asset ownership and adequate resource availability. In contrast, small companies remain more vulnerable to financial pressures despite having good operating cash flow, due to limitations in assets and access to funding.

Against this background, this study aims to analyze the influence of liquidity and operating cash flow on financial distress in companies in the consumer cyclicals sector listed on the *IDX* during 2019–2023, as well as examine whether company size moderates the relationship. This research is expected to contribute to the development of early warning systems and risk management strategies that are relevant to company managers, investors, and regulators.

The novelty of this study lies in the specific focus on the consumer cyclicals sector in post-pandemic Indonesia, which is still rarely studied; the coverage of the period before and after the pandemic (2019–2023); and the integration of company size variables as a moderating dimension that has not been widely explored. Through the signaling theory approach, this research makes a theoretical and practical contribution in understanding how financial indicators become signals of the company's condition in the midst of economic uncertainty. The results of this study are expected to enrich the literature on financial distress predictions as well as become the basis for the formulation of more adaptive financial risk mitigation policies.

METHOD

This study adopts a quantitative research approach and utilizes secondary data obtained from the financial statements and annual reports of consumer cyclicals companies. The population consists of firms in the consumer cyclicals sector listed on Indonesia Stock Exchange during the period 2019–2023. The research sample is selected using a purposive sampling method based on the following criteria.

Table 1. Research Sample Criteria

No.	Criteria	Total
1.	Consumer cyclicals sector companies listed on the IDX in 2019–2023.	154
2.	Consumer cyclicals sector companies that were consistently listed on the IDX in 2019–2023.	(48)
3.	Consumer cyclicals sector companies consistently published complete annual reports and financial statements for 2019-2023.	(30)
4.	Consumer cyclicals sector companies that use the Indonesian Rupiah (IDR) as their reporting currency.	(9)
	Number of Sampled Companies per Year	65
	Total Observations Collected During the Research Period	345

The research model uses panel logistic regression analysis and moderated regression analysis to examine the influence of liquidity and operating cash flow on financial distress, with firm size serving as a moderating variable. The model consists of one dependent variable (financial distress), two independent variables (liquidity and operating cash flow), and one moderating variable (firm size). The analytical methods applied include: (1) Descriptive Statistics, (2) Logistic Regression Analysis, and (3) Moderated Regression Analysis using interaction terms. Two regression models are estimated in this research. The first model tests the effect of liquidity and operating cash flow on financial distress without a moderate effect:

Model 1

$$Ln\frac{FD}{1-FD} = \alpha + \beta 1LQ + \beta 2CF + \varepsilon$$

Meanwhile, the second model incorporates firm size as a moderating variable through interaction terms to analyze whether it strengthens or weakens the relationship between the independent variables and financial distress.

Model 2

$$Ln\frac{FD}{1-FD} = \alpha + \beta 1LQ + \beta 2CF + \beta 3LQ * FS + \beta 4CF * FS + \varepsilon$$

Description:

$Ln\frac{FD}{1-FD}$: Financial Distress
α : Constanta
$\beta 1, 2, 3, 4$: The regression coefficient of each independent variable
LQ : Liquidity
CF : Operating Cash Flow
FS : Firm Size
LQ*FS : The interaction between liquidity and company size
CF*FS : The interaction between *operating cash flow* and company size
ε : *Error term*

The following mentions how to measure the variables used in this study.

Table 2. Research Indicators

Name of Variable	Formula	References
Financial Distress	Z = 1.2(X1) + 1.4(X2) + 3.3(X3) + 0.6(X4) + 1.0(X5)	(Kristanti & Akhmad, 2023)
Liquidity	$CR = \frac{Current\ Asset}{Current\ Liability}$	(Kristanti & Dhaniswara, 2023)

Operating Cash Flow	$OCF = \frac{Operating\ Cash\ Flow}{Current\ Liability}$	(Naibaho & Natasya, 2023)
Firm Size	Size = Ln (Total Asset)	(Kurnia et al., 2021)

The Z-score model employed in this study defines X1 as the ratio of working capital to total assets. X2 as retained earnings to total assets, and X3 as earnings before interest and tax to total assets. Meanwhile, X4 represents the market value of equity relative to total liabilities and X5 reflects the ratio of sales to total assets.

RESULT AND DISCUSSION

Table 3 presents descriptive statistics to offer a clearer overview of the characteristics of the research sample.

Table 3. Descriptive Statistics

Information	Minimum	Maximum	Mean	Std. Deviation
LQ	0.008	12.791	1.998	2.124
OCF	-3.090	2.764	0.210	0.511
FS	22.837	31.772	28.115	1.721
Information	**Frequency**		**Percentage**	
NFD	113		34.77%	
FD	212		65.23%	
Total	325		100%	

Source: Eviews results (2025)

Based on the criteria applied, a sample of 65 companies for a period of 5 years was chosen, making 325 observations of data necessary. Table 3's data reveals that, out of 325 observations, 65% of observations belong to the group of firms experiencing financial trouble.

For the factor employed in this inquiry, descriptive data are included in Table 3. There is a 1.998 mean value for liquidity. Whereas GLOB's minimum value of 0.008 indicates that the company's current assets covered less than 1% of its current liabilities, signaling a high liquidity risk. The average operating cash flow for the company is 0.210, with the lowest value of –3.090 recorded HRTA in 2020. This negative value indicates that the company generated insufficient cash from operating activities to meet its short-term obligations, highlighting significant liquidity pressure and a potential dependence on external financing sources. 28.115 is the average size of firm, which is more than the standard deviation. The firm with the lowest assets among the sample companies is valued at Rp8.278.414.392,- thus, the minimal value of the company size is 22.837 owned by the GLOB in 2019.

To assess the suitability of the proposed model to the data, the -2 Log Likelihood value was compared before and after the inclusion of independent variables, as part of the initial overall model fit test. This evaluation aims to determine whether the addition of independent variables improves the model's explanatory power. The overall model fit indicates that the Prob(LR

statistics) is 0.000000, which is below the 0.05 significance threshold. It also demonstrates how the variable of liquidity and operating cash flow can significantly enhance model fit.

Furthermore, the chi-square result is above the 0.05 significance level with a value of 0.0534. Based on Hosmer and Lemeshow test results, this suggest there is no significant discrepancy between the observed data and the model, indicating that the model is appropriate for further analysis.

Table 4. McFadden R-Square Test Results

Item	Value	Item	Value
McFadden R-squared	0.221547	Mean dependent var	0.652308
S.D. dependent var	0.476972	S.E. of regression	0.407726
Akaike info criterion	1.024233	Sum squared resid	53.52934
Schwarz criterion	1.059160	Log likelihood	-163.4378
Hannan-Quinn criter.	1.038172	Deviance	326.8756
Restr. deviance	419.9041	Restr. log likelihood	-209.9521
LR statistic	93.02851	Avg. log likelihood	-0.502886
Prob (LR statistic)	0.000000		

Source: Eviews results (2025)

According to the coefficient of determination results, liquidity and operating cash flow are both capable of influencing variations in financial distress. The McFadden R-Square value stands at 0.221547, revealing that 22.15% of the fluctuations in financial distress are explained by the independent variables in the model. Nevertheless, a substantial portion of the variability, approximately 77.85%, remains unexplained and may be attributed to other external or unobserved factors.

Table 5. Hypothesis test results

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	2.218307	0.271810	8.161248	0.0000
LQ	-0.655738	0.112339	-5.837133	0.0000
CF	-1.601732	0.391546	-4.090792	0.0000
FS	0.381689	0.125988	3.029565	0.0024
LQ*FS	-0.145133	0.051891	-2.796852	0.0052
CF*FS	-0.166644	0.217062	-0.767727	0.4426

Source: Eviews results (2025)

Table 5 presents the results of the hypothesis testing, including the coefficient, standard error, z-Statistic and p-value. The coefficient reflects the direction of the relationship whether it is positive or negative. This study applies to a significant level of 0.05, meaning that a p-value below 0.05 indicates a statistically significant relationship.

The purpose of simultaneous testing is to determine whether liquidity and operating cash flow jointly affect financial distress. Based on the Prob(LR statistic) value of 0.000000, which is less than the significance level of 0.05, it can be concluded that the null hypothesis (H0) is rejected, and the alternative hypothesis (H1) is accepted. This indicates that all independent variables (liquidity and operating cash flow) simultaneously have a significant effect on the dependent variable, financial distress.

The liquidity variable's regression coefficients value shows a negative and significant effect of liquidity on financial distress. Each unit increase in financial distress results in an increase of -

0.655 units in the company's financial distress. The negative coefficients (-0.655) show that the likelihood of the company filing for bankruptcy decreases as the liquidity value increases. This finding supports hypothesis H1.2 and aligns with the theory that higher liquidity levels reduce the risk of financial distress. Companies with strong liquidity, indicated by current ratios consistently above industry averages, demonstrate greater ability to meet short-term liabilities, maintain operational stability, and withstand macroeconomic shocks. For example, PT Selamat Sempurna Tbk and PT Indospring Tbk maintained current ratios above 4 up to 6 over five consecutive years and showed no signs of distress during the study period. This reinforces the role of liquidity as a buffer during uncertain conditions. According to signaling theory, a high liquidity ratio also serves as a positive signal to external stakeholders, reflecting sound financial management and enhancing investor and creditor confidence. These results are consistent with previous studies by Archanskaia et al. (2023) and Szymczyk et al. (2022) confirming that firms with higher liquidity are more resilient to financial distress due to stronger cash flow management and financial flexibility.

The operating cash flow variable's regression coefficients value shows a negative and significant effect of operating cash flow on financial distress. This finding confirms hypothesis H1.3, which states that operating cash flow has a negative and significant influence on financial distress. A higher level of cash flow generated from operating activities indicates that the company is financially healthy and capable of meeting its short-term obligations without relying heavily on external financing. For instance, PT Selamat Sempurna Tbk and PT Ace Hardware Indonesia Tbk maintained consistently strong and positive operating cash flows throughout the 2019–2023 period and did not experience financial distress. In contrast, companies such as PT Satria Mega Kencana Tbk and PT Hartadinata Abadi Tbk, which recorded negative operating cash flows over several years, experienced financial distress, highlighting a clear correlation between weak operational cash flows and financial pressure. From a signaling theory perspective, strong operating cash flow serves as a positive signal to investors and creditors, reflecting stable core business performance and managerial effectiveness. Moreover, operating cash flow functions as a key indicator in early warning systems, enabling firms to detect and mitigate financial threats before they escalate. Unlike accounting profits, which can be influenced by non-cash items or accounting policies, operating cash flow provides a more reliable basis for assessing financial health. Consequently, investors tend to place greater trust in a firm's cash-generating ability when evaluating creditworthiness and long-term sustainability. These findings are consistent with previous studies by Phan et al. (2022) and Putri (2021) which emphasize the role of operational cash flow in reducing bankruptcy risk by maintaining financial flexibility, particularly in volatile industries like consumer cyclicals.

The negative and significant moderating effect of firm size on the relationship between liquidity and financial distress indicates that larger firm size weakens this relationship. This suggests that having substantial assets does not necessarily ensure a company's ability to meet its liabilities and interest payments. Larger liabilities lead to greater interest burdens and when asset levels merely match liabilities, firms may struggle to cover interest costs potentially leading to future financial distress. Cases such as PT MNC Land Tbk and PT Indomobil Sukses International

Tbk with firm size values exceeding 31, still experienced financial distress despite maintaining current ratios above 1. This suggests that for large-scale companies, liquidity alone is not a dominant factor in avoiding financial difficulties due to their access to alternative funding sources such as bank loans, bonds, or equity financing. In contrast, smaller firms like PT Multi Prima Sejahtera Tbk and PT Globe Kita Terang Tbk, which have firm size values around 23 to 26.5, rely more heavily on liquidity to sustain daily operations and meet financial obligations due to limited external financing options. Based on signaling theory, a company's liquidity level acts as a signal of financial health to investors and creditors. However, the findings suggest that this signal is more impactful and meaningful when it comes from small firms, where liquidity reflects the core capability of the company to survive. For larger companies, the market tends to place more weight on broader financial indicators such as capital structure and corporate reputation. Therefore, firm size plays a dampening role, rather than a strengthening one, in the influence of liquidity on financial distress. These results are consistent with studies by Ramadani & Ratmono (2023) and Mujiani & Jum'atul (2020) which found that firm size acts as a suppressant rather than an enhancer of the effect of liquidity, highlighting that cash and liquid asset management is far more critical for smaller firms with limited financial flexibility.

The interaction between operating cash flow and financial distress, when moderated by firm size, yields statistically nonsignificant results. Specifically, the interaction coefficient of -0.166644 with a p-value of 0.4426 which exceeds the 0.05 significance threshold. This indicates that firm size does not significantly influence the relationship between operating cash flow and financial distress. The relatively uniform distribution of firm sizes in the consumer cyclicals sector reduces the ability of firm size to act as a distinguishing moderating variable. Furthermore, the wide variation in operating cash flows among both large and small firms weakens the consistency of the positive signal to the market. This finding indicates that firm size does not guarantee the effectiveness of operating cash flow in reducing financial distress, especially when issues such as poor cash management efficiency, high fixed costs, or heavy reliance on debt remain present. These results are consistent with studies by Tania & Wijaya (2021) which state that firm size does not serve as an effective moderator effect of operating cash flow on financial distress. This indicates that the magnitude of assets or the scale of a company does not necessarily ensure the contribution of operating cash flow toward minimizing the risk of financial distress.

CONCLUSION

This study concludes that both liquidity and operating cash flow have a negative and significant effect on financial distress, affirming their role as key indicators of a company's financial health. Liquidity demonstrates the ability to meet short-term obligations, while strong operating cash flow reflects operational efficiency in sustaining the business. Firm size demonstrates a varying moderating effect, as it weakens the relationship between liquidity and financial distress, while it does not exhibit a significant moderating influence on the association between operating cash flow and financial distress. This suggests that while larger firms have access to broader financial resources, high asset levels do not necessarily ensure protection from

financial distress. The findings emphasize the essential need for effective cash flow and liquidity management, particularly among smaller firms with restricted access to external capital sources. This study contributes to financial distress prediction literature and provides valuable insights for stakeholders, regulators, and financial managers in strengthening early warning systems, especially in a post-pandemic recovery context. This study is subject to certain limitations. Its scope is confined to companies in the consumer cyclicals sector listed on the *Indonesia Stock Exchange* during the 2019 to 2023 period, which may limit the applicability of the findings to other sectors. In addition, the use of firm size as a moderating variable shows relatively low variation, which may reduce its effectiveness in moderating the relationship between variables.

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