



## Determinants of Financial Distress in Food and Beverage Companies During the Pandemic and Recovery Period 2020–2024

Titis Tilam Sari<sup>1\*</sup>, Salsa Tanka Choenurillah Laroiba<sup>2</sup>  
<sup>1,2</sup> STIE Bhakti Development, Jakarta, Indonesia

(\*) Corresponden Author: [titistilamsari@gmail.com](mailto:titistilamsari@gmail.com)

### Article Info:

#### Keywords:

Liquidity;  
Leverage;  
Profitability;  
Operating Efficiency;  
Financial Distress;  
Pandemic–recovery;

#### Article History:

Received : 17-04-2026  
Revised : 28-05-2026  
Accepted : 02-06-2026

#### Article DOI :

<https://doi.org/10.53276/eligible.v5i1.133>

### Abstract

This study aims to analyze the influence of liquidity, leverage, profitability, and operating efficiency on Financial Distress in food and beverage companies listed on the Indonesia Stock Exchange during the period 2020–2024. The period is positioned as the pandemic–recovery period to test whether financial ratios remain relevant as an indicator of financial stress as companies move from the crisis phase to recovery. The study uses a quantitative approach with secondary data from annual financial statements. The sample was selected by purposive sampling and produced eight companies or 40 firm-year observations. Financial Distress was operationalized using the Altman Z-Score, so higher scores indicate healthier financial conditions and lower risk of distress. Data were analyzed using multiple linear regression with SPSS version 26. The results showed that Current Ratio and Net Profit Margin had a significant effect on the Financial Distress score, while Debt to Equity Ratio and Return on Assets did not show a significant effect individually. Simultaneously, all four financial ratios have a significant effect on Financial Distress. These findings underscore the importance of multi-ratio evaluations to support early warning systems, corporate resilience, and the sustainability of the food and beverage sector during periods of crisis and recovery.

**How to cite :** Sari, T. T., & Laroiba, S. T. C. . (2026). Determinants of Financial Distress in Food and Beverage Companies During the Pandemic and Recovery Period 2020–2024. *ELIGIBLE : Journal of Social Sciences*, 5(1), 66-77. <https://doi.org/10.53276/eligible.v5i1.133>



This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/). Any further distribution of this work must maintain attribution to the author(s) and the title of the work, journal citation and DOI.

Published under licence by LLDIKTI Wilayah III Jakarta.

## INTRODUCTION

The COVID-19 pandemic has changed the patterns of consumption, distribution, and operational decisions of companies. In the food and beverage sector, these pressures are unique because the products produced are directly related to the needs of the community, but companies still face the risk of declining revenues, changes in raw material and logistics costs, working capital needs, and demand uncertainty. This condition can increase financial pressure if the company's ability to maintain cash flow

and operational performance is inadequate. *Financial Distress* becomes relevant as a condition of declining financial health that arises before more serious financial failures (Anjasmar, 2020; Erika et al., 2023).

The period 2020–2024 in this study is positioned as the pandemic–recovery period. The early years of observation describe the pressures caused by COVID-19, while the following years capture the process of adjustment and recovery of economic activity. This context raises a more interesting question than just whether *Financial Distress* is important to study, namely whether the financial ratios that have been used as indicators of distress remain explanatory as companies move from the crisis phase to the recovery phase. The study by Erika et al. (2023), for example, captured the *financial distress* conditions of food and beverage companies in 2020–2021, while this study expands the observation horizon to 2024 to allow evaluation in the context of a longer transition.

Liquidity, leverage, profitability, and operating efficiency are indicators that can reflect a company's ability to withstand financial pressures. *Current Ratio* (CR) describes the ability to meet short-term liabilities; *Debt to Equity Ratio* (DER) indicates the intensity of debt use relative to capital; *Net Profit Margin* (NPM) indicates the ability to generate profits from sales; while *Return on Assets* (ROA) reflects the effectiveness of asset use in generating profits. Changes in these ratios can provide signals about the company's ability to maintain its business continuity.

However, previous research has shown inconsistent results. Wijaya and Suhendah (2023) found that liquidity had a significant effect on *Financial Distress*, while Silanno and Loupatty (2021) and Anistasya and Setyawan (2022) did not find a significant effect on *the Current Ratio*. On leverage, Erhamwilda and Nurhayati (2022) found a significant influence of DER on *Financial Distress*, while Silanno and Loupatty (2021) obtained insignificant results. Inconsistencies were also seen in profitability and ROA. Chaidir and Saputra (2022) found that profitability ratios had a significant effect on food and beverage companies, while Antoniawati and Purwohandoko (2022) showed that ROA had no effect on *Financial Distress* in transportation companies. These differences in evidence suggest that the relationship between financial ratios and *Financial Distress* can depend on the characteristics of the sector, period, and how *Financial Distress* is operational.

The research gap of this study thus lies in the inconsistency of empirical evidence regarding the ability of CR, DER, NPM, and ROA to explain *financial distress*, especially in the food and beverage sector during the pandemic period until recovery. This sector was chosen because it is directly related to public needs and has an important role in the sustainability of economic activities, but remains vulnerable to changes in costs, working capital pressures, and asset use effectiveness. Evidence in the 2020–2024 period is needed to see if relevant financial indicators in the crisis phase continue to provide information when economic conditions improve.

Based on these gaps, this study aims to analyze the influence of liquidity proxied by *the Current Ratio*, leverage with *the Debt to Equity Ratio*, profitability with *Net Profit Margin*, and operating efficiency with *Return on Assets* on *Financial Distress* in food and beverage companies listed on the Indonesia Stock Exchange during 2020–2024. The contribution of the research lies in the simultaneous testing of four financial indicators in the context of the pandemic–recovery, comparing results with previous evidence in the same or different sectors, and strengthening the implications of *Financial Distress* for *corporate resilience*, *economic resilience*, and *business sustainability* in sectors that are directly related to the needs of society.

## LITERATURE REVIEW

### Financial Distress and the Pandemic Period–Recovery

*Financial Distress* is a condition of decline in financial health that can appear before bankruptcy. In the context of this study, *Financial Distress* is not read only as a binary status of distress or non-distress, but as a financial health score that allows differences in the level of company conditions to be observed over time. The score approach is important in the pandemic–recovery period because companies can move from more depressed conditions to healthier conditions gradually. Previous research in the food and beverage sector shows that financial health conditions during the pandemic are not uniform between companies, so evaluations using financial indicators need to pay attention to the context of time and company characteristics (Erika et al., 2023; Chaidir & Saputra, 2022).

### Liquidity and Financial Distress

Liquidity indicates a company's ability to meet short-term obligations using current assets. Conceptually, adequate liquidity ability can reduce payment pressures and maintain operational continuity. However, empirical evidence is not uniform. Wijaya and Suhendah (2023) reported a significant effect of liquidity on *Financial Distress*, while Silanno and Loupatty (2021) and Anistasya and Setyawan (2022) found that *the Current Ratio* had no significant effect. This difference shows that the effectiveness of liquidity as an indicator of distress can change according to the characteristics of the sector and the observation period.

**H1: Liquidity proxied by Current Ratio affects Financial Distress.**

### Leverage dan Financial Distress

Leverage shows the amount of debt used compared to own capital. Debt can support business activities, but too high a liability burden can increase the vulnerability of companies when revenues decrease or costs increase. Erhamwilda and Nurhayati (2022) found that DER has a significant effect on *Financial Distress*, while Silanno and Loupatty (2021) find no significant effect. This inconsistency is a reason to retest DER in food and beverage companies during the 2020–2024 period.

**H2: Leverage proxied by the Debt to Equity Ratio has an effect on Financial Distress.**

### Profitability and Financial Distress

Profitability reflects a company's ability to generate profits from business activities. Better profit margins increase the company's space to finance operations, meet obligations, and build reserves to deal with uncertainty. Chaidir and Saputra (2022) found profitability to have a significant effect on *financial distress* in food and beverage companies, while variations in results in other studies showed that the direction and strength of relationships can be influenced by proxies and sample characteristics. This study used *Net Profit Margin* to capture a company's ability to generate profits from sales.

**H3: Profitability proxied by Net Profit Margin affects Financial Distress.**

### Operational Efficiency and Financial Distress

Operational efficiency in this study is proxied by *Return on Assets*, which is the company's ability to use total assets to generate profits. Higher ROA generally reflects

more productive asset utilization, but previous research results have not been consistent. Silanno and Loupatty (2021) found that ROA had a significant effect on *Financial Distress*, while Antoniawati and Purwohandoko (2022) found that ROA had no effect. These differences show the need to retest in different periods and sectors.

**H4: Operational efficiency proxied with Return on Assets affects Financial Distress.**

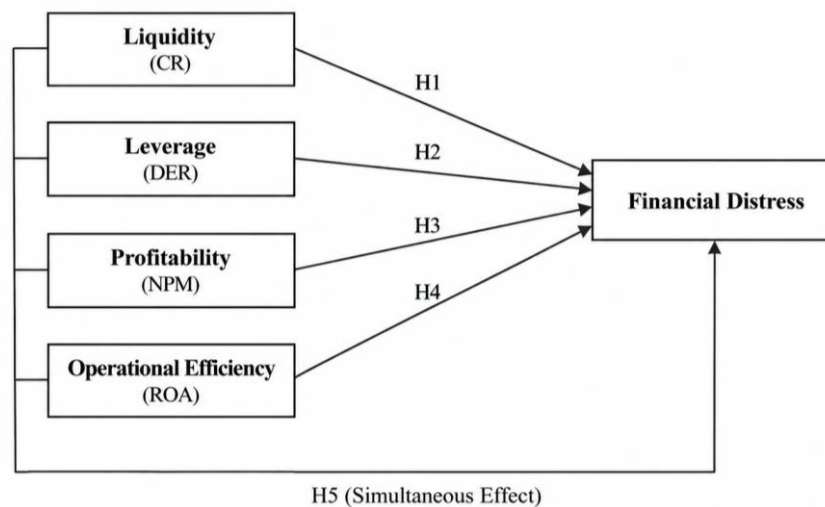
**H5: Liquidity, leverage, profitability, and operating efficiency simultaneously affect Financial Distress.**

Table 1. Research Position and Research Gap

| Research                          | Object/Period                      | Relevant Findings/Focus                                            | Position on this study                                                                                                                                     |
|-----------------------------------|------------------------------------|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Silanno & Loupatty (2021)         | Consumer goods industry, 2015–2019 | CR and DER are insignificant; ROA is significant                   | Shows inconsistencies between ratios before the pandemic.<br>Covering the pre-pandemic phase to the beginning of the pandemic, not yet the recovery phase. |
| Chaidir & Saputra (2022)          | Food and beverage, 2017–2020       | CR and ROA have a significant effect                               | Showing the difference in results between indicators in the consumption sector.                                                                            |
| Anistasya & Setyawan (2022)       | Consumer goods industry, 2016–2020 | Profitability and leverage are relevant; CR is insignificant       | Shows that results may vary according to the characteristics of the sector.                                                                                |
| Antoniawati & Purwohandoko (2022) | Transportation, 2018–2020          | ROA and CR are insignificant; significant leverage                 | Focus on the pandemic phase; have not observed the transition until 2024.                                                                                  |
| Erika et al. (2023)               | Food and beverage, 2020–2021       | Mapping distress conditions during a pandemic with Zmijewski Score | Strengthening the relevance of the ratio, but not yet specifically photographing the pandemic–recovery 2020–2024.                                          |
| Nurenzi & Umaimah (2025)          | Manufacturing companies, 2023 data | Profitability, leverage, and liquidity are influential             | Integrating the pandemic–recovery phase and implications for economic resilience and sustainability.                                                       |
| This research                     | Food and beverage, 2020–2024       | CR, DER, NPM, ROA → Financial Distress                             |                                                                                                                                                            |

Source: Processed from previous research and author development (2026)

Figure 1. Research Conceptual Framework



Source: Developed by the author (2026)

## METHODS

This study uses an explanatory quantitative approach with secondary data in the form of annual financial statements of food and beverage companies listed on the Indonesia Stock Exchange (IDX) for the period 2020–2024. Data was obtained through the IDX's official website and the company's annual report. The data structure is in the form of a *firm-year*, which is eight companies observed for five years, resulting in 40 observations. Because the processing was carried out using multiple linear regression in SPSS 26 without estimating the company's individual effects, the observations were analyzed as *pooled firm-year data*, not a *purely one-entity* time series.

The study population included 129 food and beverage companies listed on the Indonesia Stock Exchange during the observation period. The sample was selected using purposive sampling based on the availability of financial statements and research criteria, including companies that suffered repeated losses during the 2020–2024 period. Based on these criteria, eight companies were obtained as samples. The use of a five-year period allowed the study to capture changes in company conditions from the pandemic phase to the recovery phase.

Independent variables consist of liquidity, leverage, profitability, and operating efficiency. Liquidity is proxied by *Current Ratio* (CR), leverage by *Debt to Equity Ratio* (DER), profitability by *Net Profit Margin* (NPM), and operating efficiency by *Return on Assets* (ROA). The dependent variable is *Financial Distress* which in this revised version is operated using the *Altman Z-Score* for public manufacturing companies. The use of scores is necessary in order for the direction of the regression coefficient to be interpreted consistently: the higher the Z-Score indicates the healthier financial condition or the lower the risk of *Financial Distress*; conversely, a lower score indicates higher financial distress (Altman, 1968).

Table 2. Operational Definitions and Measurement Variables

| Variabel             | Proxies        | Formula                                          | Direction of Interpretation                                                  | Scale  |
|----------------------|----------------|--------------------------------------------------|------------------------------------------------------------------------------|--------|
| Liquidity            | CR             | Current Assets / Current Liabilities             | Higher values indicate greater liquidity capacity                            | Ratio  |
| Leverage             | THE ER         | Total Liabilities / Total Equity                 | Higher values indicate greater use of debt relative to capital               | Ratio  |
| Profitability        | NPM            | Net Profit / Net Sales                           | Higher values indicate a larger profit margin                                | Ratio  |
| Operating Efficiency | LENGTH         | Net Profit / Total Assets                        | A higher value indicates the ability of an asset to generate greater profits | Racing |
| Financial Distress   | Altman Z-Score | $Z = 1,2X_1 + 1,4X_2 + 3,3X_3 + 0,6X_4 + 1,0X_5$ | $Z > 2.99$ : healthy; $1.81-2.99$ : grey area; $Z < 1.81$ : distress         | Shoes  |

Altman Z-Score Description:  $X_1$  = Working Capital/Total Assets;  $X_2$  = Retained Earnings/Total Assets;  $X_3$  = EBIT/Total Assets;  $X_4$  = Market Value of Equity/Total Liabilities;  $X_5$  = Sales/Total Assets.

Source: Altman (1968) and author's processing.

Data analysis includes descriptive statistics, classical assumption tests, multiple linear regression, partial tests (t-test), simultaneous tests (F tests), and determination coefficients. The significance level is set at 5 percent. For t-tests, the hypothesis is accepted if the p-value is less than 0.05 and/or the t-calculated absolute value exceeds the t-table. For simultaneous tests, the model is declared significant if the p-value in ANOVA is less than 0.05. All processing uses IBM SPSS Statistics version 26 (Ghozali, 2018; Santoso, 2019).

## RESULT AND DISCUSSION

### Result

The results of multiple linear regression maintain the empirical output of the initial manuscript. With Financial Distress interpreted as the Altman Z-Score, the regression equation obtained is  $Z = 1.210 + 0.407CR - 0.023DER + 1.789NPM - 1.973ROA + e$ . Since higher scores indicate healthier conditions, positive signs on CR and NPM mean that an increase in both ratios is related to an increase in financial health scores or a decrease in distress risk, not an increase in distress.

Table 3. Multiple Linear Regression Test Results

| Model | Variable          | B     | Std. Error | Beta  | t      | Say. | Tolerance | LIVE  |
|-------|-------------------|-------|------------|-------|--------|------|-----------|-------|
| 1     | (Constant)        | 1,210 | ,264       |       | 4,581  | ,000 |           |       |
|       | Current Ratio     | ,407  | ,136       | ,554  | 2,997  | ,005 | ,519      | 1,927 |
|       | Debt to Equity    | -,023 | ,021       | -,152 | -1,103 | ,278 | ,933      | 1,072 |
|       | Net Profit Margin | 1,789 | ,408       | ,828  | 4,389  | ,000 | ,499      | 2,004 |

| Model | Variable         | B      | Std. Error | Beta  | t      | Say. | Tolerance | LIVE  |
|-------|------------------|--------|------------|-------|--------|------|-----------|-------|
|       | Return on Assets | -1,973 | ,974       | -,313 | -2,026 | ,050 | ,745      | 1,342 |

a. Dependent Variable: Financial Distress Score (Altman Z-Score)

Source: SPSS Output 26, data processed in 2025

Table 4. Determination Coefficient Test Results

| Model | R    | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|-------|------|----------|-------------------|----------------------------|---------------|
| 1     | ,615 | ,379     | ,308              | ,80222                     | 1,763         |

a. Predictors: (Constant), CR, DER, NPM, ROAb. Dependent Variable: Financial Distress Score (Altman Z-Score)

Source: SPSS 26 output, data processed in 2025

The Adjusted R Square value of 0.308 indicates that the variation in the Financial Distress Score can be explained by CR, DER, NPM, and ROA by 30.8 percent, while the rest is explained by other factors outside the model, such as cash flow, sales growth, company size, cost pressures, and macroeconomic factors.

Table 5. Results of the t-test (Partial test)

| Model | Variable          | B      | Std. Error | Beta  | t      | Say. | Tolerance | LIVE  |
|-------|-------------------|--------|------------|-------|--------|------|-----------|-------|
| 1     | (Constant)        | 1,210  | ,264       |       | 4,581  | ,000 |           |       |
|       | Current Ratio     | ,407   | ,136       | ,554  | 2,997  | ,005 | ,519      | 1,927 |
|       | Debt to Equity    | -,023  | ,021       | -,152 | -1,103 | ,278 | ,933      | 1,072 |
|       | Net Profit Margin | 1,789  | ,408       | ,828  | 4,389  | ,000 | ,499      | 2,004 |
|       | Return on Assets  | -1,973 | ,974       | -,313 | -2,026 | ,050 | ,745      | 1,342 |

a. Dependent Variable: Financial Distress Score (Altman Z-Score)

Source: SPSS 26 output, data processed in 2025

Table 6. Results of Test F (Simultaneous Test)

| Model | Components | Sum of Squares | df | Mean Square | F     | Say. |
|-------|------------|----------------|----|-------------|-------|------|
| 1     | Regression | 13,720         | 4  | 3,430       | 5,330 | ,002 |
|       | Residual   | 22,524         | 35 | ,644        |       |      |
|       | Total      | 36,245         | 39 |             |       |      |

a. Dependent Variable: Financial Distress Score (Altman Z-Score)

b. Predictors: (Constant), CR, DER, NPM, ROA

Source: SPSS 26 output, data processed in 2025

Table 6 shows an F-calculated value of 5.330 with a significance value of 0.002. With an F-table of about 2.64 at  $df_1 = 4$  and  $df_2 = 35$ , the F-count is larger than the F-table and the significance value is less than 0.05. Thus, CR, DER, NPM, and ROA simultaneously affect the Financial Distress Score. This result also corrects the error in the conclusion of the initial manuscript which stated  $F = 4.581$  and  $Sig. = 0.000$ ; the number 4.581 on the output is actually a t value for constants, not a statistic F.

## Discussion

### Liquidity and Financial Distress

*The Current Ratio* has a coefficient of 0.407 with a t-calculation of 2.997 and a significance of 0.005. Thus H1 is accepted. Since dependent variables are measured using the *Altman Z-Score* and a higher score indicates a healthier company condition, a positive coefficient does not mean that liquidity increases distress. Rather, an increase in the *Current Ratio* is related to an increase in the Z-Score so that it substantively indicates a decrease in the risk of *Financial Distress*. This finding makes sense because more adequate current assets magnify the company's ability to meet short-term liabilities and provide liquidity space to sustain operations when economic conditions change. These results are in line with evidence that liquidity can be a relevant indicator of *Financial Distress* (Wijaya & Suhendah, 2023; Chaidir & Saputra, 2022), although it is different from Silanno and Loupatty (2021) and Anistasya and Setyawan (2022) who did not find a significant influence of CR. These differences confirm that the pandemic–recovery context can change the importance of liquidity reserves for corporate resilience.

### Leverage dan Financial Distress

*The Debt to Equity Ratio* has a coefficient of  $-0.023$  with a t-count of  $-1.103$  and a significance of 0.278, so H2 is rejected. The negative direction of the Z-Score descriptively suggests that the increase in DER tends to be related to a decrease in financial health score or an increase in the risk of distress, but the relationship is not statistically supported. These results show that the debt-to-capital structure has not been a strong enough independent explanation for the *Financial Distress* of food and beverage companies during 2020–2024. The findings are similar to those of Silanno and Loupatty (2021) who found the DER to be insignificant, but different from Erhamwilda and Nurhayati (2022) and Nurenzi and Umaimah (2025) who showed influential leverage. These differences can reflect the variation of sectors, funding structures, and the ability of companies to manage debt during the recovery.

### Profitability and Financial Distress

*The Net Profit Margin* has a coefficient of 1.789 with a t-count of 4.389 and a significance smaller than 0.001, so H3 is accepted. Just like the CR interpretation, the positive coefficient should be read against the direction of the *Altman Z-Score*. An increase in NPM is related to an increase in the financial health score and therefore indicates a decrease in the risk of *Financial Distress*. Economically, higher profit margins provide better internal capacity to finance operational needs, absorb rising costs, and strengthen the company's ability to cope with uncertainty. These results corroborate the findings of Chaidir and Saputra (2022) and Nurenzi and Umaimah (2025) that profitability is a relevant indicator for *financial distress conditions*. In the pandemic–recovery period, the ability to restore profit margins appears to be an important signal of improved financial resilience.

### Operational Efficiency and Financial Distress

*Return on Assets* has a coefficient of  $-1.973$  with a t-count of  $-2.026$  and a Sig. value displayed by SPSS of 0.050. However, the absolute value of the t-count is still slightly lower than the t-table of 2.030 at  $df = 35$ . The two-way p-value underlying the t is slightly above 0.05 and rounded by the SPSS to 0.050. Therefore, in order to maintain the consistency of the test criteria at the level of 5 percent, H4 is declared rejected and

the ROA is classified as having no significant effect. The direction of the negative coefficient to the *Z-Score* should not be interpreted as a definite relationship as the statistical evidence is inadequate. These results are in line with Antoniawati and Purwohandoko (2022) who found ROA to have no effect, but differ from Silanno and Loupatty (2021) and Chaidir and Saputra (2022). These differences suggest that the effectiveness of asset use can interact with other factors such as cost structure, asset intensity, and demand recovery.

### **Simultaneous Influence, Economic Resilience, and Sustainability**

Simultaneous tests showed that CR, DER, NPM, and ROA together had an effect on the *Financial Distress Score*, so H5 was accepted. These findings indicate that Financial Distress is more accurately understood through a combination of indicators rather than a single ratio separately. In the pandemic–recovery period, companies can have relatively good liquidity but still face margin pressure, or conversely they can have high debt but still be able to maintain operations through profitability and asset management. Therefore, early warning systems should consider the ratio profile in an integrated manner.

The implications of the research go beyond the company's internal decisions. The food and beverage sector is directly related to community needs, supply chain activities, labor absorption, and consumption sustainability. The ability of companies in this sector to maintain financial health contributes to *corporate resilience* and to a broader extent can support *economic resilience*. Monitoring *Financial Distress* through indicators of liquidity, funding structure, profitability, and asset effectiveness can be part of efforts to maintain business sustainability. For management, the findings emphasize the importance of maintaining liquidity and profit margins without ignoring the quality of debt structures and asset productivity. For investors and creditors, the results show the need to read ratios in an integrated manner before concluding the company's risk level.

The novelty of the research lies in three aspects. First, the period 2020–2024 allows analysis from the pandemic phase to recovery, not just one crisis phase. Second, the research focuses on food and beverage companies that are directly related to public needs. Third, the research results are placed in the perspective of resilience and sustainability, so that *Financial Distress* is not only discussed as an internal problem of the company, but also as an indicator of the sector's ability to maintain its economic functions when facing shocks and the recovery process.

### **CONCLUSION**

This study shows that the ability of financial ratios to explain *Financial Distress* differs between indicators in food and beverage companies during the 2020–2024 period. Liquidity proxied by *Current Ratio* and profitability proxied by *Net Profit Margin* show a significant influence on the *Altman Z-Score*. Since higher scores represent healthier financial conditions, increased CR and NPM are associated with decreased risk of *Financial Distress*. Meanwhile, the *Debt to Equity Ratio* and *Return on Assets* did not show a significant influence individually. Simultaneously, the four ratios have a significant influence on *Financial Distress*, so the evaluation of the company's condition should use a combination of financial indicators, rather than relying on one ratio.

In the context of the pandemic-recovery, the findings show that liquidity and the ability to maintain profit margins are important elements in a company's financial

resilience. For food and beverage companies, strengthening these conditions can help maintain business continuity in sectors that are directly related to people's needs. Thus, *financial distress* management can contribute to *corporate resilience*, *economic resilience*, and *business sustainability*, especially when companies move from the crisis phase to more stable economic conditions.

This study has limitations on the relatively small sample size, five-year period, and the use of four internal company ratios. Further research can expand the number of companies, explicitly compare the pandemic and recovery subperiods, and include cash flow, sales growth, company size, governance, inflation, interest rates, and supply chain factors. The use of a panel data approach and a comparison of several Financial Distress prediction models can also provide a more comprehensive picture of a company's resilience.

## REFERENCES

- Altman, E. I. (1968). Financial ratios, discriminant analysis and the prediction of corporate bankruptcy. *The Journal of Finance*, 23(4), 589–609.
- Anistasya, V., & Setyawan, I. R. (2022). The effect of profitability, liquidity and leverage on financial distress. *Journal of Managerial and Entrepreneurship*, 4(3), 786–795. <https://doi.org/10.24912/jmk.v4i3.19773>
- Anjasmara, U. A. (2020). The Effect of Liquidity, Leverage, Profitability and Company Size on Financial Distress in Manufacturing Companies Listed on the IDX in 2016–2018 [Thesis, Semarang State University].
- Antoniawati, A., & Purwohandoko, P. (2022). Analysis of the influence of profitability, liquidity, and leverage on financial distress in transportation companies listed on the IDX in 2018–2020. *Journal of Management Science*, 10(1), 28–38. <https://doi.org/10.26740/jim.v10n1.p28-38>
- Asysyafa, F. H., & Putri, E. (2023). Analysis of the influence of financial performance, company size and company age on financial distress (Case study of manufacturing companies in the food and beverage sub-sector in 2018–2021). *JIM: Scientific Journal of History Education Students*, 8(4), 3559–3570.
- Atun, Y. (2020). The effect of current ratio, debt ratio, and total asset turnover ratio on financial distress in manufacturing companies listed on the Indonesia Stock Exchange (IDX). *Journal of Accounting and Business Studies*, 8(2), 143–154.
- Chaidir, M., & Saputra, F. K. (2022). Analysis of financial performance with liquidity, profitability and activity ratios to financial distress (Empirical study on food and beverage sector manufacturing companies listed on the Indonesia Stock Exchange for the period 2017–2020). *Studia Ekonomika*, 20(1), 50–72. <https://doi.org/10.70142/studiaekonomika.v20i1.99>
- Duli, N. (2019). *Research methods*. Deepublish.
- Erhamwilda, T. N., & Nurhayati. (2022). The effect of working capital turnover and leverage on financial distress. *Journal of Accounting Research*, 2(2). <https://doi.org/10.29313/jra.v2i2.1266>

- Erika, E., Tanuwijaya, M., Kartiadi, V. P., Aswat, I., & Rusmita, S. (2023). Analysis of financial distress during the COVID pandemic on food and beverage sector companies listed on the IDX. *JAAKFE UNTAN*, 12(3), 196–206. <https://doi.org/10.26418/jaakfe.v12i3.59718>
- Firdaus, S. L., & Nur'aidawati, S. (2024). The effect of net profit margin, working capital turnover and debt to equity ratio on financial distress in the food and beverage sub-sector listed on the Indonesia Stock Exchange for the period 2018–2023. *Journal of Research and Publication Innovation*, 2(4), 1352–1363.
- Ghozali, I. (2018). Application of multivariate analysis with IBM SPSS 25 program. Diponegoro University Publishing Board.
- Mahatmyo, A., & Jatnika, I. (2022). The effect of current ratio and debt to asset ratio on financial distress (Empirical study on textile and garment sub-sector companies listed on the Indonesia Stock Exchange). *Journal of Business*, 10(1), 169–182.
- Maulana, J., & Suhartati, S. (2022). The effect of return on asset (ROA) and company size on financial distress in chemical sub-sector companies listed on the Indonesia Stock Exchange. *Land Journal*, 3(1), 102–113.
- Muis, M. A. (2020). Analysis of the effect of return on assets, net profit margin, return on equity, debt to equity ratio, and debt to asset ratio to predict financial distress in manufacturing companies listed on the Indonesia Stock Exchange for the period 2014–2017. *JMB: Journal of Management and Business*, 9(1), 51–61.
- Mulya, A. A., & Andini, P. (2023). Liquidity, leverage, cash flow and company size as determinants of financial distress factors. *Fair Value: Scientific Journal of Accounting and Finance*, 5(11).
- Nurenzi, Z. A. P., & Umaimah, U. (2025). Determinants of financial distress: The role of profitability, leverage, liquidity, cash flow and company lifespan. *Scientific Journal of Management, Economics, & Accounting (MEA)*, 9(2), 724–744. <https://doi.org/10.31955/mea.v9i2.5790>
- Putri, F. F., Haifa, H., & Widaninggar, N. (2022). Analysis of the influence of financial ratios and macroeconomic factors on financial distress in manufacturing companies. *JAKUMA: Journal of Accounting and Financial Management*, 3(1), 78–90.
- Santoso, S. (2019). Proficient in parametric statistics. PT Gramedia.
- Saputri, N. M. N., & Padnyawati, K. D. (2021). The effect of profitability, liquidity, and leverage on financial distress. *Hita Accounting and Finance*, 2(2), 563–580. <https://doi.org/10.32795/hak.v2i2.1572>
- Seingo, A. S., & Gesmani, R. (2023). Analysis of the effect of current ratio, debt to equity ratio and return on assets on financial distress in textile and garment companies listed on the Indonesia Stock Exchange for the period 2016–2020. *Equilibrium: Journal of Business and Accounting*, 17(1), 43–50. <https://doi.org/10.61179/ejba.v17i1.502>

- Silanno, G. L., & Loupatty, L. G. (2021). The effect of current ratio, debt to equity ratio and return on asset on financial distress in companies in the consumer goods industry sector. *Journal of Economics, Social & Humanities*, 2(07), 85–109.
- Sugiyono. (2018). *Educational research methods of quantitative, qualitative, and R&D approaches to Alphabet*.
- Wijaya, J., & Suhendah, R. (2023). The effect of liquidity, leverage, and cash flow on financial distress. *Journal of Economics*, 28(2), 177–196.  
<https://doi.org/10.24912/je.v28i2.1468>