

# Detecting Potential Company Bankruptcy Using the "Modified Altman Z-Score Model" (Case Study on PT GoTo Gojek Tokopedia Tbk Company, Period 2021-2023)

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## ABSTRACT

This study aims to analyze the financial health and potential bankruptcy of PT GoTo Gojek Tokopedia Tbk for the period of 2021 to 2023 using the "Altman Z-Score" model. This research is based on the phenomenon of technology companies that should have benefited during the pandemic, but instead suffered losses during the pandemic and after the pandemic. This study uses a quantitative-descriptive method that analyzes secondary data in the form of financial statements of PT GoTo Gojek Tokopedia Tbk for the period of 2021 to 2023 which come from the Indonesia Stock Exchange (IDX) website and the official website of the company PT GoTo Gojek Tokopedia Tbk. The research results that the company's Z-Score value has decreased sharply, from 9.10 in 2021 which is in the healthy category, to 6.89 in 2022, and finally -6.70 in 2023 which is classified as bankrupt. This decline was caused by the deterioration of 4 (four) main financial ratios, namely the ratio of working capital to total assets, retained earnings to total assets, EBIT to total assets, and the market value of equity to liabilities.

**Keywords:** "Altman Z-score; Financial Performance; Bankruptcy"

## INTRODUCTION

The financial stability of a company in the modern era is a crucial factor in the sustainability of a company <sup>[1]</sup>. PT Go To Gojek Tokopedia Tbk, is one of the pioneers of digital companies and plays a role in the development of the digital economy in Indonesia <sup>[2]</sup>. However, the company's financial statements show consecutive losses during the 2021-2023 period that the company should have made a profit during the pandemic, due to the very rapid adoption of technology during the pandemic <sup>[2]</sup>. The state of the company that continues to lose money during the 2021-2023 period shows that there is a potential risk of bankruptcy that can occur. This phenomenon is not in accordance with the expectations of companies engaged in technology that have good prospects when the pandemic occurred with the reality experienced by PT Go To Tbk which suffered financial losses.

One of the models used in this study is the Altman Z-Score Model. This model combines four main financial ratios, namely the working capital to total assets ratio, the retained earnings to total assets ratio, the EBIT to total assets ratio, and the equity market value to liabilities ratio <sup>[3]</sup>. The Altman Z-score model has been widely used in various companies to analyze the potential bankruptcy of a company <sup>[4]</sup>. This model aims

to provide an overview of the potential bankruptcy risks faced by PT Goto Tbk during the 2021-2023 period.

The problems that can be drawn based on the background are how the financial health of PT Go To Tbk in the period from 2021 to 2023 using the "Altman Z-score" model and how the potential for bankruptcy (distress) of PT GoTo Tbk during the period 2021-2023 based on the results of the calculation of the Altman Z-Score model.

The goal to be achieved from this study is to analyze the financial health and detect the potential for early bankruptcy of PT Go To Gojek Tokopedia Tbk in the period from 2021 to 2023 using the "Altman Z-score" analysis model.

This study uses the ratios proposed by Altman that have been modified <sup>[3]</sup>, that is:

### 1. "Working Capital to Total Assets Ratio"

This ratio measures a company's ability to manage its total assets that are used to support the company's operational activities for the short term. The formula that can be used to calculate this ratio is as follows:

$$WCtTA = \frac{Working\ Capital}{Total\ Assets}$$

### 2. Ratio of Retained Earnings to Total Assets

This ratio is used to find out how much profit a company makes compared to its total assets. The result of a high ratio indicates the level of profitability of the company. The formula that can be used is as follows:

$$REtTA = \frac{Retained\ Earnings}{Total\ Assets}$$

### 3. EBIT to Total Assets Ratio

This ratio measures the level of profitability of a company using the company's total assets, if this ratio shows high returns, it means that the company is efficient in managing its assets to make a profit. The formula that can be used is as follows:

$$EBITtTA = \frac{EBIT}{Total\ Assets}$$

### 4. Ratio of Market Value of Equity to Value of Liabilities

This ratio calculates the value of a company's equity or capital compared to its total debt. If this ratio indicates a high value, it means that the company has a lot of equity compared to the debt that the company has, which means that the company is in a good financial state. The formula that can be used is as follows:

$$MVEtBVL = \frac{Equity\ Value}{Liability\ Value}$$

This study uses a zone classification based on Altman which is used as the main indicator to assess the financial condition of the company. This calcification is divided into three zones <sup>[5]</sup>, that is:

#### 1. Safe Zone ( $Z > 2,60$ )

A score from the Z-score calculation that is more than 2.60, indicates a healthy financial performance of the company and has a low potential risk of bankruptcy.

#### 2. Gray Zone ( $1,10 \leq Z \leq 2,60$ )

The resulting score is between more than 1.10 and less than 2.60, indicating the uncertain financial state of the company. Companies that fall into this zone have sufficient financial performance and a low potential risk of bankruptcy.

#### 3. Distress Zone ( $Z < 1,10$ )

The resulting score is less than 1.10, indicating that the company is experiencing significant financial problems, the company's financial condition is not healthy, and has a high potential for bankruptcy (*distress*).

## MATERIALS & METHODS

This study uses a quantitative-descriptive approach that focuses on financial statements released by the company PT GoTo Gojek Tokopedia Tbk which is sourced from the official website and through the "Indonesia Stock Exchange" (IDX). The earnings report compiled through the official website of the

IDX and the company is for the periods 2021, 2022, and 2023 which includes working capital data, total assets, total liabilities, total equity, and EBIT (*Earnings Before Interest and Tax*) value. The research period was carried out from 2021 to 2023 based on the financial statements of "PT Go To Gojek Tokopedia Tbk". Data analysis was carried out using 4 Altman financial ratios, including, "working capital to total assets, retained earnings to total assets, EBIT to total

assets ratio, and equity market value ratio to liabilities value", then continued by interpreting into Altman's zones, namely, safe zone ( $Z > 2.99$ ), gray zone ( $1.8 < Z \leq 2.99$ ), and bankruptcy zones ( $Z \leq 1.8$ ).

## RESULT

This study aims to analyze the financial performance of PT GoTo Gojek Tokopedia Tbk during the 2021-2023 period using the "Altman Z-score" model.

**Table 1 Calculation Results of the Modified Altman Z-Score Model**

Indicator	Year		
	2021	2022	2023
X1	0,153219406	0,158156619	0,384395597
X2	0	0	0
X3	-0,143172146	-0,291233694	-1,675397695
X4	8,628311937	7,440833225	1,943706939
Z	9,102730011	6,893291879	-6,696145109
Criteria	Safe Zone	Safe Zone	Distress Zone

"Source: Data Processed, 2024"

Based on table 1, it is found that the results of the Z-Score calculation at PT Go To Gojek Tokopedia Tbk show a downward trend from 2021 to 2023. In 2021, a Z-Score value of 9.1 indicates that the company is in a healthy zone. However, in 2022, the Z-Score value decreased drastically to 6.8, although it is still in the safe category. This decline indicates the weakening of the company's financial condition. In 2023, the Z-Score value worsened to reach -6.6, which placed the company in the category of bankruptcy or financial distress.

These results are consistent with several previous studies that used the "Altman Z-Score" model in analyzing a company's financial condition. Madona & Paramitha, 2024 states that although companies in the LQ45 index generally have good financial conditions, there is still a possibility that companies are threatened with bankruptcy [6]. This is in accordance with the condition of PT Go To, which initially showed a high Z-Score value (healthy) but ended up experiencing the potential for bankruptcy in 2023 as its financial performance continued to deteriorate.

## DISCUSSION

The decline in the value of the Z-Score can also be attributed to the research of Susanto & Handoyo, 2023 which shows that the ratio of profitability and solvency has a significant relationship to the company's financial difficulties. At PT GoTo, the negative profitability ratio and weakening solvency from year to year contributed to the decline in the value of the Z-Score, indicating potential *financial distress*.

The significant decline in the Z-Score in PT Go To also provides similar implications in Susanto's research, 2023, which shows that profitability has a positive and significant relationship to efficiency [7]. On the other hand, the negative profitability experienced by PT Go To has the potential to reduce efficiency and result in a decrease in financial performance which is reflected in the Z-Score value.

The decline in the value of the Z-Score from 9.10 in 2021, to 6.89 in 2022, to entering the bankruptcy zone with a value of -6.69 in 2023 shows clear signs of financial distress. This is in line with the concept put forward by Altman, 2018, where a decrease in the value of the Z-Score below the threshold of 1.8 indicates a high risk of bankruptcy [8].

Working Capital to *Total Assets* provides an overview of the company's liquidity and the company's efficiency in using its working capital. The results of the study show that the value of *Working Capital to Total Assets of PT Goto Tbk* for the 2021-2023 period has consistently decreased every year, which is an indication of the company's liquidity ability which has also decreased.

PT Goto Tbk's *Retained Earnings to Total Assets* for the 2021-2023 period shows a negative value caused by losses every year. This is in line with research conducted by Mutasimbillah & Paramitha, namely, companies that have low or negative profit values have great potential to face financial distress <sup>[9]</sup>.

The ratio of EBIT to Total Assets (*Earnings Before Interest and Taxes to Total Assets*) in PT Goto Tbk for the 2021-2023 period shows consistent negative results every year. This shows the company's lack of efficiency in managing the company's operations which are used in generating company profits from its total assets. This finding is in line with research by Susanto & Handoyo, 2020 which shows that profitability has a significant influence on potential *financial distress* <sup>[10]</sup>.

The *Market Value of Equity to Book Value of Liabilities* ratio of PT Goto Tbk for the 2021-2023 period shows a decline in the company's capital structure which results in an increase in the risk of corporate bankruptcy.

## CONCLUSION

PT GoTo Tbk's financial performance during the 2021-2023 period showed a significant downward trend based on the analysis of the Altman Z-Score model. In 2021, the results of the Z-Score calculation placed the company in the healthy zone category. However, in 2022 the Z-Score value decreased, indicating the beginning of a decline in financial performance in the company. This decline is even sharper in 2023, where the Z-Score value reached a negative value, which puts the company in the category of bankruptcy zone. This decline indicates that the company is

experiencing serious financial distress due to its inability to generate profits, increased debt burdens, and declining equity. The conclusion obtained from this study is that the financial performance of the company "PT GoTo Gojek Tokopedia Tbk" during the period 2021-2023 experienced a very significant decline which was calculated using the "Altman Z-score" model. This can be seen in the results of the Z-score in 2021 which is still in the healthy category, but has consistently decreased in 2022 which is in the gray category and the lowest point occurred in 2023 which is included in the bankruptcy category. Therefore, PT GoTo Gojek Tokopedia Tbk to evaluate the company's financial strategy to reduce the risk of bankruptcy. The "Altman Z-score" model in this study can be used in helping investors and stakeholders to make strategic decisions.

## Declaration by Authors

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