

BANKRUPTCY ANALYSIS OF STARTUP COMPANIES WITH USING THE Z-SCORE METHOD (ALTMAN)

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Abstract

This research aims to determine the potential bankruptcy of PT Bukalapak.com (BUKA) and PT Gojek Tokopedia Tbk (GOTO) using the Z-Score (Altman) method. The population in this study is the financial reports of PT Bukalapak.com (BUKA) and PT Gojek Tokopedia Tbk (GOTO), with a sample of the financial reports of PT Bukalapak.com (BUKA) from 2020 to 2022 and PT Gojek Tokopedia Tbk (GOTO) from 2020 to 2022. Data collection This research was carried out using the documentation method. The data analysis technique uses the Z-Score (Altman) model with the variables Working Capital to Total Assets, Retained Earnings to Total Assets, EBIT to Total Assets, and Book Value of Equity to Book Value of Debt. The results of this research show that in 2020 PT Bukalapak.com (BUKA) and PT Gojek Tokopedia Tbk (GOTO) were in bankruptcy because the Z-Score was below 1,10. In 2021-2022 PT Bukalapak.com (BUKA) and PT Gojek Tokopedia Tbk (GOTO) are in a healthy condition because the Z-Score is above 2,60.

Keywords: Financial Performance, Bankruptcy, Altman Z-Score

INTRODUCTION

The very rapid development of technology means that Startups, which can be interpreted as technology start-up companies, are also developing very rapidly. Startup development has been going on since dot com companies began to boom in the 1990s in the United States. With that development very rapidly, Startup progress is marked by updates and supported by the ease of controlling humans with rules or certain limitations. Startup development in Indonesia can be seen based on the Startup classification. Startup classification can be categorized into three based on the company's valuation value, namely unicorn, decacorn and hectocorn. According to Kompas (2022), Gojek has become a decacorn, namely, a startup that has a valuation above 10 billion US dollars. Furthermore, startups that have achieved unicorn status, namely Tokopedia, have a valuation of 7 billion US dollars, Traveloka has a valuation of 3 billion US dollars, Bukalapak, Ovo have a valuation of 2.9 billion US dollars, J&T Express has a valuation of 2 billion US dollars, Xendit, Ajaib has a valuation of 1.7 billion US dollars. However, there are no startups in Indonesia that fall into the hectocorn startup category, namely companies that have a valuation of up to 100 billion US dollars. The listing of startups on the Indonesian Stock Exchange will create increasingly fierce competition, requiring managers to continue to improve their company's performance. According to Yunus (2021:2) "Improving financial performance every year is one of the important factors that is used as a benchmark for investors or potential investors in deciding to invest in the company." By improving company performance, companies can compete and develop and avoid bankruptcy.

Bankruptcy is a problem that every company must be aware of. Because if a company is hit by financial difficulties, the company will experience business failure. Therefore, companies must carry out bankruptcy analysis as early as possible. Bankruptcy analysis carried out with the aim of obtaining an early warning of bankruptcy. The earlier you know the signs of bankruptcy, the better it will be for management so that management can make improvements as early as possible Possible. Financial company reports are really needed for analysis bankruptcy of a company. A financial report the company will show the company's performance in generating profits. The financial statement analysis includes the calculation and interpretation of ratios finance. The model that can be used to

predict bankruptcy in a company is the Z-Score Model (Altman). According to Rudianto (2013:257), Altman's third research produced a flexible Z-Score formula because it can be used for various types of company business, both those that go public and those that do not, and is suitable for use in developing countries like Indonesia. The ratios used are, working capital to total assets, retained earnings to total assets, earnings before interest and tax to total assets, and book value of equity to book value of debt. From the calculation results, a Z-Score value will be obtained which will describe the company's financial position as being in a healthy, vulnerable or bankrupt condition.

PT Bukalapak.com Tbk (BUKA) and PT Gojek Tokopedia Tbk (GOTO) are Startups in Indonesia that conducted an Initial Public Offering (IPO) on the Indonesia Stock Exchange. The listing of these two startups on the Indonesian Stock Exchange (BEI) made both companies public companies and had new capital investment. According to Paranesa, et al (2019:94) "Capital plays a very important role in a company, the more capital a company has, the more it will influence the increase or decrease in a company's profit level." According to Irwan (2018:146) apart from own capital, debt is also the capital of a company which comes from loans from various parties which must be paid in the future. Debts that are too large will result in financial distress. Income also plays a very important role in a company. Revenue is all company income originating from industrial products or other parties. The main goal of a company is to maximize profits. According to Kartini (2017:63) the size of a company's profits will be a guarantee for a company to operate stably, however, many companies experience a decline in profits and even go bankrupt. The following is the profit (loss) growth data for PT Bukalapak.com Tbk (BUKA) and PT Gojek Tokopedia Tbk (GOTO) over the last three years.

Table 1. Data on Profit Growth (Loss) of PT Bukalapak.com Tbk (BUKA) and PT Gojek Tokopedia Tbk (GOTO) 2020-2022

Year	BUKA		GOTO	
	Profit and (loss) (In Millions Rupiah)	Growth (%)	Profit and (loss) (In Millions Rupiah)	Growth (%)
2020	(1.316.358)	-	(16.621.682)	-
2021	(1.675.383)	27,27 (loss)	(22.531.192)	35,55 (loss)
2022	1.985.902	-218,53 (profit)	(40.266.275)	78,71 (loss)

Source: Financial Reports of PT Bukalapak.com Tbk and PT Gojek Tokopedia Tbk. In 2020-2022. Data Processed (2023)

In the profit (loss) of PT Bukalapak.com Tbk (BUKA) in 2020-2021, there was an increase in losses from IDR (1,316,358,000,000) to IDR (1,675,383,000,000). The increase that occurred was due to an increase in the cost of goods sold, namely the purchase of goods sold by the business group. Then the increase in sales and marketing expenses, namely partners, feature subsidies, online advertising, payment channels. And an increase in short-term loan interest expenses, loan expenses, bank and other account fees, as well as deferred taxes. In the profit (loss) column of PT Gojek Tokopedia Tbk (GOTO) in 2020-2022 there was an increase in losses from IDR (16,621,682,000,000) to IDR (40,266,275,000,000). The increase was due to employee salaries and benefits, promotions, advertising and marketing, depreciation and amortization, delivery service costs, professional fees, and management and contract services. This shows that there is a decline in financial performance which, if left unchecked, will have a negative impact for the company and in the worst case the company will experience bankruptcy.

METHOD

This research uses descriptive research using a quantitative approach. Descriptive research is research that aims to collect information about an existing symptom, namely a condition that actually occurred at the time the research was conducted. This descriptive research uses a quantitative approach which is carried out by analyzing financial report data and then the results of the analysis will be summarized so that it can determine whether the condition of a company can be said to be healthy, vulnerable or bankrupt. The population in this study is the financial reports of PT Bukalapak.com (BUKA) and PT Gojek Tokopedia Tbk (GOTO), with a sample of the financial

reports of PT Bukalapak.com (BUKA) from 2020 to 2022 and PT Gojek Tokopedia Tbk (GOTO) from 2020 to 2022. Data collection This research was carried out using the documentation method.

The variables used in this research are as follows:

1. Working Capital to Total Assets

This ratio is used to measure the ability of PT Bukalapak.com Tbk (BUKA) and PT Gojek Tokopedia Tbk (GOTO) for the 2020-2022 period to fulfill their short-term obligations and measure the level of liquidity of the assets of PT Bukalapak.com Tbk (BUKA) and PT Gojek Tokopedia Tbk (GOTO) for the 2020-2022 period.

2. Working Capital to Total Assets

This ratio is a measurement of cumulative profitability or retained earnings of PT Bukalapak.com Tbk (BUKA) and PT Gojek Tokopedia Tbk (GOTO) for the 2020-2022 period which reflects the age of PT Bukalapak.com Tbk (BUKA) and PT Gojek Tokopedia Tbk (GOTO) for the 2020-2022 period as well as the revenue strength of PT Bukalapak.com Tbk (BUKA) and PT Gojek Tokopedia Tbk (GOTO) for the 2020-2022 period.

3. EBIT to Total Assets

This ratio has the function of measuring the ability of PT Bukalapak.com Tbk (BUKA) and PT Gojek Tokopedia Tbk (GOTO) for the 2020-2022 period in obtaining profits from the assets used or can be said to be a measure of the productivity of the assets of PT Bukalapak.com Tbk (BUKA) and PT Gojek Tokopedia Tbk (GOTO) 2020-2022 period.

4. Book Value of Equity to Book Value of Debt

This ratio shows the ability of PT Bukalapak.com Tbk (BUKA) and PT Gojek Tokopedia Tbk (GOTO) to fulfill obligations from the book value of equity.

The data analysis used in this research is quantitative data analysis, namely a data analysis technique by analyzing using calculated numbers from the balance sheet and profit and loss financial statements which are then used as a basis for decision making. Using the formula discovered by Altman:

$$Z = 6,56X_1 + 3,26X_2 + 6,72X_3 + 1,05X_4$$

Description:

Z = Bankruptcy Index

X₁ = Working Capital/Total Assets

X₂ = Retained Earnings/Total Assets

X₃ = EBIT/Total Assets

X₄ = Book Value of Equity/Book Value of Debt

The resulting score must be compared with the assessment standards as follows following:

1. If the Z value > 2,60 then the company is in a safe zone the company is in a healthy condition so bankruptcy is likely very little happens.
2. If 1.1 < Z < 2,60 then the company is in the gray zone the company is in a vulnerable condition (gray area). In this condition, the company experiencing financial problems that must be handled in the right way.
3. If Z < 1,1 then the company is in the dangerous zone bankrupt condition (experiencing financial difficulties and high risk).

RESULTS AND DISCUSSION

RESULTS

The following table presents the results of calculating the Z-Score value ratio:

Table 2. Z-Score Ratio Results of PT Bukalapak.com Tbk (BUKA) and PT Gojek

Stock Code	Year	X ₁	X ₂	X ₃	X ₄	Z-Score
BUKA	2020	0,34	-2,95	-0,70	1,63	-10,39
	2021	0,86	-0,35	-0,06	7,53	12,02
	2022	0,77	-0,27	0,08	29,19	35,40
GOTO	2020	0,46	-1,92	-0,55	2,23	-4,61
	2021	0,15	-0,51	-0,14	8,63	7,45
	2022	0,16	-0,85	-0,29	7,44	4,13

Source: Processed Data (2023)

Based on the results of the Z-Score calculation, it can be seen that the potential for bankruptcy of PT Bukalapak.com Tbk (BUKA) and PT Gojek Tokopedia Tbk (GOTO) is in accordance with the criteria determined by *Altman*. The following is the Z-Score working table:

Table 3. Z-Score work table

Z-Score value	Interpretation
$Z > 2,60$	Safe zone; The company is in healthy condition so the possibility of bankruptcy is very small.
$1,1 < Z < 2,60$	Gray zone; the company is in a vulnerable condition (gray area). In this condition, the company experiences financial problems which must be handled in the right way.
$Z < 1,1$	Danger zone; the company is in bankruptcy (experiencing financial difficulties and high risk).

Source: Rudianto (2013:258)

Table 4. Analysis of Z-Score Calculation Results of PT Bukalapak.com Tbk (BUKA) and PT Gojek Tokopedia Tbk (GOTO) 2020-2022

Stock Code	Year	Z-Score	Interpretation
BUKA	2020	-10,39	The company is in bankruptcy (experiencing financial difficulties and high risk)
	2021	12,02	The company is in a healthy condition so the possibility of bankruptcy is very small and this condition is worth maintaining.
	2022	35,40	The company is in a healthy condition so the possibility of bankruptcy is very small and this condition is worth maintaining.
GOTO	2020	-4,61	The company is in bankruptcy (experiencing financial difficulties and high risk)
	2021	7,45	The company is in a healthy condition so the possibility of bankruptcy is very small and this condition is worth maintaining.
	2022	4,13	The company is in a healthy condition so the possibility of bankruptcy is very small and this condition is worth maintaining.

Source: Processed Data (2023)

DISCUSSION

Working Capital/Total Assets Ratio (X_1)

Working capital for 2020-2022 shows that the working capital of PT Bukalapak.com Tbk (BUKA) and PT Gojek Tokopedia Tbk (GOTO) for three consecutive years experienced positive fluctuations, due to fluctuating levels of current debt. This ratio shows the ability of PT Bukalapak.com Tbk (BUKA) and PT Gojek Tokopedia Tbk (GOTO) to fulfill their short-term obligations and measures the level of asset liquidity. According to Wardah (2020:4) "A working capital with a positive value shows the company's ability to pay its bills, whereas if a company has capital with a negative value then the company will experience difficulties in fulfilling its obligations."

The increase in current debt of PT Bukalapak.com Tbk (BUKA) from 2020 to 2021 was due to an increase in third party trade payables, other third party payables, short-term accrued expenses, short-term post-employment benefits liabilities, tax payables, share-based payment liabilities, liabilities long-term liabilities that mature within one year for bank loans, and long-term liabilities that mature within one year for finance lease liabilities. Then the increase in current debt of PT Gojek Tokopedia Tbk (GOTO) from 2020 to 2021 was due to an increase in third party and related party business debt, other third party and related party debt, short-term accrued expenses, short-term post-employment benefits liabilities, tax debt. , short-term deferred income, long-term liabilities due within one year for bank loans, long-term liabilities due within one year for secured loans, and long-term liabilities due within one year for finance lease liabilities.

Total assets for 2020-2022 show that the total assets of PT Bukalapak.com Tbk (BUKA) over the last three years have increased. The increase from 2020 to 2021 was due to an increase in cash and cash equivalents, other current financial assets, gross receivables from third party employers and related parties, other third party receivables, other current inventories, current prepaid expenses, other current advances, taxes current prepayments, investments accounted for using the equity method, goodwill, intangible assets other than goodwill, and other non-financial non-current assets. Meanwhile, the increase that occurred from 2021 to 2022 was caused by an increase in other current financial assets, other third party receivables, current inventories, current prepaid expenses, current prepaid taxes, investments recorded using the equity method, investments in associates, assets use rights, and goodwill.

Total assets for 2020-2022 show that the total assets of PT Gojek Tokopedia Tbk (GOTO) experienced fluctuations, where in 2021 they increased and in 2022 they decreased. The increase that occurred from 2020 to 2021 was due to an increase in cash and cash equivalents, short-term investments, other current financial assets, trade receivables from third parties and related parties, other receivables from third parties and related parties, current prepaid expenses, current advances. others, current prepaid taxes, investments in joint venture entities and associates, non-current financial assets measured at fair value through profit or loss, other non-current financial assets, deferred tax assets, fixed assets, goodwill, and intangible assets other than goodwill.

Retained Earnings/Total Assets Ratio (X_2)

Retained earnings for 2020-2022 indicate that the retained earnings of PT Bukalapak.com Tbk (BUKA) and PT Gojek Tokopedia Tbk (GOTO) were negative for three consecutive years. PT Bukalapak.com Tbk (BUKA)'s retained earnings experienced fluctuations, where in 2021 it experienced a decrease and in 2022 it experienced an increase. PT Gojek Tokopedia Tbk (GOTO)'s retained earnings decreased for three consecutive years due to a decrease in profits whose use had not been determined. The decrease that occurred in profits whose use had not been determined was due to increasing company losses. According to Wardah (2020:4) "Low retained earnings may indicate a bad business year or a reduction in life for a company." According to Yunus (2021:8) "Retained earnings that have a negative value are retained earnings with a minus balance because the company experiences losses that exceed the accumulated retained earnings from previous years."

EBIT/Total Assets Ratio (X₃)

PT Bukalapak.com Tbk (BUKA) showed an increase for three consecutive years. The increase from 2020 to 2021 was due to increased sales and business income, a decrease in expenses including employee benefits expenses, depreciation and amortization expenses and other expenses, and an increase in financial income. The increase from 2021 to 2022 was due to increased sales and business income as well as other income, a decrease in expenses including ticket, sales and promotion expenses, employee benefits expenses, depreciation and amortization expenses, and an increase in financial income. PT Gojek Tokopedia Tbk (GOTO) EBIT showed a decline for three consecutive years. The decrease from 2020 to 2021 was due to an increase in cost of goods sold and income, selling expenses, and general and administrative expenses. The decrease from 2021 to 2022 was due to an increase in cost of goods sold and revenues, selling expenses, general and administrative expenses, share of losses of associates recorded using the equity method, and other losses.

Equity Book Value/Debt Book Value Ratio (X₄)

The book value of equity, PT Bukalapak.com Tbk (BUKA) shows an increase for three consecutive years. The increase that occurred from 2020 to 2021 occurred due to an increase in ordinary shares, additional paid-in capital, and remeasurement reserves for the defined benefit program. The increase that occurred from 2021 to 2022 occurred due to the increase in ordinary shares, additional paid-in capital, reserves for remeasurement of defined benefit plans, and other equity components. The book value of PT Gojek Tokopedia Tbk (GOTO) equity in 2020-2022 experienced fluctuations. From 2020 to 2021, there was an increase in the book value of equity due to the increase in ordinary shares, additional paid-in capital and share-based reserves. From 2021 to 2022, there will be a decrease in the book value of equity due to a decrease in treasury shares, other equity components, retained earnings whose use has not been determined, non-controlling interests.

Analysis of 2020 Z-Score Calculation Results

In 2020 PT Bukalapak.com Tbk (BUKA) obtained a Z value of -10,39 which, if adjusted with the interpretation column, means that PT Bukalapak.com Tbk (BUKA) in 2020 was in bankruptcy (experiencing financial difficulties and high risk). This condition is due to the ratio of X₂ and X₃ being very small in 2020 when compared to the values of X₂ and The Z-Score result in 2020 was only -10,39, which shows that the financial performance of PT Bukalapak.com Tbk (BUKA) is not good.

In 2020 PT Gojek Tokopedia Tbk (GOTO) obtained a Z value of -4,61 which, if adjusted with the interpretation column, means that PT Gojek Tokopedia Tbk (GOTO) in 2020 was in a state of bankruptcy (experiencing financial difficulties and high risk). This condition is caused by the ratio due to the ratio of X₂ and X₃ being very small in 2020 when compared with the values of X₂ and This has an effect on the Z-Score results in 2020 so that it can only be at -4,61, which indicates that the financial performance of PT Gojek Tokopedia Tbk (GOTO) is not good.

Analysis of 2021 Z-Score Calculation Results

In 2021 PT Bukalapak.com Tbk (BUKA) obtained a Z value of 12,02 which, if adjusted to the interpretation column, PT Bukalapak.com Tbk (BUKA) in 2021 is in a healthy condition so that bankruptcy problems are very small and this condition is worth considering. keep it up. This condition is caused by the X₄ ratio which has experienced a large increase from the previous year where the X₄ ratio is the book value of equity to the book value of debt. This increase was due to a large increase in the book value of equity from the previous year even though the book value of debt also increased from the previous year. Companies must maintain the book value of debt to avoid swelling and the company must be able to maintain and even increase the book value of equity so that there is a balance between the book value of equity and the book value of debt.

In 2021 PT Gojek Tokopedia Tbk (GOTO) obtained a Z value of 7,45 which, if adjusted with the interpretation column, means that PT Gojek Tokopedia Tbk (GOTO) in 2021 is in a healthy condition so the possibility of bankruptcy is very small and this condition is worth maintaining. This value is the best increase in value since the last three years, this largest increase is due to the X₄ ratio which experienced a large increase from the previous year where the X₄ ratio is the book value of

equity to the book value of debt. This increase was due to a large increase in the book value of equity from the previous year even though the book value of debt also increased from the previous year. Companies must maintain the book value of debt to avoid swelling and the company must be able to maintain and even increase the book value of equity so that there is a balance between the book value of equity and the book value of debt.

Analysis of 2022 Z-Score Calculation Results

In 2022 PT Bukalapak.com Tbk (BUKA) obtained a Z value of 35,40 which, if adjusted with the interpretation column, means that PT Bukalapak.com Tbk (BUKA) in 2022 will be in a healthy condition so that bankruptcy problems are very small and this condition is appropriate for maintained. This value is the best increase in value since the last three years. This largest increase is due to the X4 ratio which experienced a large increase from the previous year where the X4 ratio is the book value of equity to the book value of debt. This increase was due to a large increase in the book value of equity from the previous year and a decrease in the book value of debt from the previous year. Companies must maintain the book value of debt to avoid swelling and the company must be able to maintain and even increase the book value of equity so that there is a balance between the book value of equity and the book value of debt.

In 2022 PT Gojek Tokopedia Tbk (GOTO) obtained a Z value of 4,13 which, if adjusted with the interpretation column, means that in 2022 PT Gojek Tokopedia Tbk (GOTO) will be in a healthy condition so that bankruptcy problems are very small and this condition is worth maintaining. However, if you pay attention to the significant decrease in the Z value from the previous year, this decrease is due to the X4 value which has decreased because this year there was a quite large decrease in the book value of equity from the previous year and the book value of debt also increased from the previous year. Companies must maintain the book value of debt to avoid swelling and the company must be able to maintain and even increase the book value of equity so that there is a balance between the book value of equity and the book value of debt.

CONCLUSION

Based on the results of the calculation of working capital on total assets, it can be said to be quite good because the working capital of PT Bukalapak.com Tbk (BUKA) and PT Gojek Tokopedia Tbk (GOTO) for three consecutive years was positive and experienced fluctuations, due to fluctuating levels of current debt and The total assets of PT Bukalapak.com Tbk (BUKA) have increased every year, while the total assets of PT Gojek Tokopedia Tbk (GOTO) have fluctuated.

Based on the results of calculating retained earnings on total assets, it can be said to be bad because the retained earnings of PT Bukalapak.com Tbk (BUKA) and PT Gojek Tokopedia Tbk (GOTO) were negative for three consecutive years. The retained earnings of PT Bukalapak.com Tbk (BUKA) fluctuate while the retained earnings of PT Gojek Tokopedia Tbk (GOTO) decrease every year.

Based on the results of the EBIT calculation of total assets, it can be said to be bad, this is because PT Bukalapak.com Tbk (BUKA) and PT Gojek Tokopedia Tbk (GOTO) have negative EBIT values. PT Bukalapak.com Tbk (BUKA) has a small EBIT value even though it increases every year and PT Gojek Tokopedia Tbk (GOTO) EBIT decreases every year.

Based on the results of calculating the book value of equity against the book value of debt, it can be said to be very good, this is because the book value of equity of PT Bukalapak.com Tbk (BUKA) has a large value and continues to increase every year. The book value of PT Gojek Tokopedia Tbk (GOTO) equity also has a large value but experiences fluctuations.

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