



## BANKRUPTCY PREDICTION ANALYSIS USING FULMER AND TAFFLER MODELS AT PT. AIRASIA INDONESIA TBK

By

Vanisa Meifari\*<sup>1</sup>, Erlina<sup>2</sup>, Iskandar Muda<sup>3</sup>, Keulana Erwin<sup>4</sup>

<sup>1</sup> University Sumatera Utara, Medan, Indonesia

<sup>2</sup> STIE Pembangunan Tanjungpinang, Indonesia

email: \*[vanisameifari@yahoo.co.id](mailto:vanisameifari@yahoo.co.id)

### Article Info

Volume 6, Issue 7, 2024

Received: 19 April 2024

Accepted: 10 May 2024

doi:10.33472/AFJBS.6.7.2024.605-615

### Abstract

This research aims to analyze bankruptcy predictions that occur in the company PT. AirAsia Indonesia, Tbk is listed on the Indonesia Stock Exchange using the Fulmer and Taffler models. This research uses a quantitative descriptive approach. The object of this research is PT. AirAsia Indonesia, Tbk using financial reports for the 2019-2022 period. The analysis method uses the Fulmer and Taffler model. The analysis results using the Fulmer model for the 2019-2022 company are predicted to experience bankruptcy with a calculation value of less than 0. Meanwhile, the results of the analysis using the Taffler model show differences in each year, where in 2019, it is predicted that they will not experience bankruptcy with a calculation value of more than 0.3, while in 2020-2021, it is expected to experience bankruptcy with a negative value and a calculated value of less than 0.2. Then, in 2022, it is predicted to recover or have the potential to go bankrupt because it is in the gray area with a calculated value of between 0.2-0.3.

**Keywords: Bankruptcy, Fulmer Model, Taffler Model**

## INTRODUCTION

In the current era of globalization and modernization, every activity requires a connecting mode between production and consumption activities, one of which is closely related to the aviation industry. The increasingly massive development of the global aviation industry has positively influenced Indonesia's progress.

This rapid development has pushed the level of competition even tighter. Various airlines grow and compete to get consumers to remain competitive and survive. Therefore,

companies need to pay attention to several things when facing competition. One thing that companies need to pay attention to is financial performance.

Financial performance can be informed in financial reports (Riani, 2020). So, it is necessary to carry out an analysis to understand the information presented in the financial reports, which makes it easier to make decisions in the future. The financial report analysis that is widely used is ratio analysis. Financial report analysis with ratios only emphasizes one

financial aspect. This needs to be improved in financial report analysis. Therefore, an analytical tool is required to combine various financial aspects, called bankruptcy analysis (Ananto et al., 2020).

Before bankruptcy occurs, the company will experience a phase of financial difficulties (*financial distress*) characterized by uncertainty in profitability. If a company experiences financial difficulties, the company will undoubtedly experience business failure. Therefore, the company must carry out a bankruptcy analysis. (Ilamutia et al., 2023)

Bankruptcy analysis is carried out as an early warning of a company's bankruptcy. The earlier the bankruptcy warning is known, the better it is for management to make improvements to prevent bad possibilities from happening. A bankruptcy analysis is essential to carry out, considering that the bankruptcy of a public company (*go public*) will harm many parties, both internal and external parties to the company.

PT. AirAsia Indonesia Tbk. is an airline based on a low-fare philosophy emphasizing lean, simple, and efficient operations. This aims to create an affordable market for all levels of society by dividing routes where the market has no potential. The condition of the financial performance of PT AirAsia, Tbk., which has been unstable in the last 4 (four) years, has the potential for bankruptcy at the company.

Using the Fulmer model produces an H-Score value to show that the company is in a healthy or unhealthy condition which has 9 (nine) variable indicators (Putri & Werastuti, 2020). The Taffler model also produces a T-Score value, which is a value to predict whether a company is in a healthy or unhealthy condition, thereby providing an idea for future designs. The number of indicators in this model is 4 (four) variable indicators used to measure the health level of the company (Gunawan & Warninda, 2022).

Therefore, this research is expected to provide an overview of the potential for bankruptcy at PT. AirAsia Indonesia Tbk, which might happen in the future.

## **THEORETICAL BASIS**

### ***Signaling Theory***

Signaling theory was first put forward by Spence (1973), who explained how financial management provides signals about the company through various aspects of financial information disclosure, which can be seen as signals by investors. Signals in the form of information are considered important indicators for investors and business people who have an essential role in the investment decision-making process.

According to (Mariani et al., 2018), signal theory provides information to investors in the form of positive signals (*good news*) or negative signals (*bad news*). If a company reports a profit increase, this information is considered a positive signal and indicates good conditions. Conversely, if a company reports a decline in profits, then the company is considered to be in bad condition, and the information is interpreted as a negative signal.

Signal theory is based on the principle that managers and shareholders have different access to company information. Managers only know some information, but it must be disclosed to shareholders. Thus, there is an information imbalance between managers and shareholders (Dewi Buchari et al., 2023).

### **Financial Report Analysis**

Financial report analysis is an evaluation process using financial reports that aims to predict the company's future financial performance and gain an understanding of the position and performance of the company or entity (Muda et al., 2017).

According to (Nurcahya & Dewi, 2020), financial report analysis needs to be understood and understood by various parties who read it. After analyzing the financial reports, a company's financial position can be known so that it can be assessed that the company has achieved previously set targets. Apart from assessing the financial position, financial report analysis can also provide information about the company's weaknesses and strengths so that steps can be taken to improve these problems.

### Bankruptcy

According to (Wulansari, 2022), bankruptcy is a condition where a company can no longer fulfill its obligations. This situation does not arise suddenly but can be identified through warning signs that appear when analyzed. A bankruptcy analysis is carried out to obtain early warnings regarding the weakness of the company's financial condition. If signs of bankruptcy are recognized early, this can benefit company management and other interested parties.

According to (Brigham, 2009) (Hernawaty et al., 2021), bankruptcy as a failure that occurs in a company can be interpreted as follows:

- Economic Failure Failure occurs when a company experiences losses, or income is insufficient to cover its operational costs. If the profit generated is less than the cost of capital or the present value of the company's cash flow is less than its liabilities. Failure occurs when the company's actual cash flow is far below the expected cash flow.
- Financial Failure Failure occurs when a company faces difficulties in obtaining funds, both in the form of cash and working capital. Financial Failure Failure can be interpreted as the company's inability to pay debts, differentiating between the cash flow and stock bases.

### Model Fulmer

The Fulmer model is a model created by Fulmer in 1984. The Fulmer model is a prediction model that uses 9 financial ratio variables that are related to bankruptcy prediction. The Fulmer model was developed by (Masdiantini & Warasniasih, 2020) as follows:

$$F\text{-Score} = 5,528V_1 + 0,212V_2 + 0,073V_3 + 1,270V_4 - 0,120V_5 + 2,335V_6 + 0,575V_7 + 1,083V_8 + 0,894V_9 - 6,075$$

Information:

$V_1 = \text{Retained Earning} / \text{Total Assets}$

$V_2 = \text{Sales} / \text{Total Assets}$

$V_3 = \text{Earning Before Taxes} / \text{Total Equity}$

$V_4 = \text{Cash Flow From Operation} / \text{Total Liabilities}$

$V_5 = \text{Total Liabilities} / \text{Total Assets}$

$V_6 = \text{Current Liabilities} / \text{Total Assets}$

$V_7 = \text{Log Fixed Assets}$

$V_8 = \text{Working Capital} / \text{Total Liabilities}$

$V_9 = \text{Log EBIT} / \text{Interest Expenses}$

With the following assessment criteria:

- If the F value  $< 0$ , then the company is classified as unhealthy and has a high chance of experiencing bankruptcy.
- If the F value  $> 0$ , then the company is classified as a company in a healthy condition or not experiencing bankruptcy.

### Model Taffler

The Taffler model is a model that predicts company bankruptcy. There are four variables used in this Taffler model. This model can be measured with the following equation:

$$T\text{-Score} = 0,53X_1 + 0,13X_2 + -0,18X_3 + 0,16X_4$$

Information:

$X_1 = \text{Earning Before Taxes} / \text{Current Liabilities}$

$X_2 = \text{Current Assets} / \text{Current Liabilities}$

$X_3 = \text{Current Liabilities} / \text{Total Assets}$

$X_4 = \text{Sales} / \text{Total Assets}$

With the following analysis criteria:

- If  $T < 0.2$ , then the company is classified in this model as experiencing bankruptcy.
- If  $T > 0.3$ , then the company is classified in this model as not experiencing bankruptcy.
- If the T value is  $0.2 - 0.3$ , the company is classified as being in the gray area.

### RESEARCH METHODS

This research is quantitative and descriptive. Descriptive research is research conducted to analyze and describe research results based on data collected without changing the content of the data. Meanwhile, quantitative research is research that obtains data in the form of numbers. The data collected

from this research is secondary data. Secondary data was obtained indirectly or through other sources before this research was conducted.

Secondary data from this research is in the form of PT's financial reports. AirAsia Indonesia, Tbk sourced from the official website of the Indonesia Stock Exchange (BEI) from 2019 to 2022. Collection techniques were taken from documents related to financial report data and literature studies obtained from various trusted sources. The data is processed by calculating the ratios in the Fulmer and Taffler models.

**RESULTS AND DISCUSSION**

The Fulmer and Taffler model analysis is an analytical tool used to predict company bankruptcy by calculating the values of the ratios in the Fulmer and Taffler model and then entering them into the equation.

**Model Fulmer**

In Fulmer's model, there are nine indicators analyzed, namely:

**Retained Earning to Total Assets**

This ratio measures profitability or the ability of the company's total assets to generate retained earnings. The greater this ratio, the more significant the contribution to retained earnings. On the other hand, if it is smaller, it indicates that the company's financial condition is less healthy. The following is the X calculation Table PT. AirAsia Indonesia, Tbk for the 2019-2022 period.

**Table 1**  
**Calculation of Retained Earnings to Total Assets PT. AirAsia Indonesia, Tbk 2019-2022**

Year	Retained Earning	Total Assets	X1
2019	-6.328.963.065.859	2.613.070.074.932	-2,42
2020	-9.237.151.172.375	6.064.083.658.062	-1,52
2021	-11.580.239.345.285	5.136.948.816.783	-2,25
2022	-13.230.134.784.568	5.356.962.889.162	-2,47

Source: processed data

Based on the table above, from 2019 to 2022, a very drastic decline resulted in negative values. In year X<sub>1</sub>, In 2019, the result was -2.42, which means that every Rp. 1.- of total assets

owned could produce retained earnings of -2.42. Next is the X ratio<sub>1</sub> in 2020; the results were -1.52, an increase from the previous year, which means that every Rp. 1.- of total assets owned produced retained earnings of -1.52. Then, in 2021<sub>1</sub>, it experienced a decrease; the result was -2.25, which means that every Rp. 1.- of total assets owned by the company could produce retained earnings of -2.25. In 2022, the result obtained was -2.47, which experienced a drastic decrease from the previous year, meaning that every Rp. 1.- of total assets owned by the company could produce retained earnings of -2.47. From the data above, the X<sub>1</sub> ratio is unfavorable yearly, which means the company experiences consecutive yearly losses.

**Sales to Total Assets**

This ratio shows management's ability to use all company assets to generate sales. The higher the ratio, the better the company's performance; conversely, if the ratio is lower, the company's performance will not be good. The following is the X calculation Table PT. AirAsia Indonesia, Tbk for the 2019-2022 period.

**Table 2**  
**Calculation of Sales to Total Assets PT. AirAsia Indonesia, Tbk 2019-2022**

Year	Sales	Total Assets	X2
2019	6.708.800.607.590	2.613.070.074.932	2,57
2020	1.610.973.387.045	6.064.083.658.062	0,27
2021	626.001.737.959	5.136.948.816.783	0,12
2022	3.780.525.920.680	5.356.962.889.162	0,71

Source: Data processed

Based on the table above, the highest ratio value occurred in 2019 at 2.57, while the lowest ratio value occurred in 2021 at 0.12. The ratio of sales to total assets in 2019-2022 experienced a decrease and increase. In 2019, the sales proceeds to total assets were obtained by X<sub>2</sub> amounting to 2.57, which means that every Rp. 1,- total assets can generate 2.57 sales. Furthermore, in 2020, there was a decrease from the previous year; the sales proceeds to total assets were obtained by X<sub>2</sub> amounting to 0.27, which means that every Rp.

1- of total assets can generate 0.27 sales. Then, in 2021, there was a more drastic decline than the previous year; the sales proceeds of total assets were obtained by X<sub>2</sub> amounting to 0.12, which means that every Rp. 1- of total assets can generate 0.12 sales. In 2022, the sales proceeds to total assets will be X<sub>2</sub>, amounting to 0.71, an increase compared to the previous year, which means that every Rp. 1,- of total assets can generate 0.71 sales. The decrease in the sales to total assets ratio was caused by sales increasing more than total assets.

**Earning Before Taxes to Total Equity**

This ratio measures a company's ability to generate profits before tax using total equity. The greater the ratio value, the faster the return on capital increases. The smaller the ratio value, the slower the rate of return on capital. The following is the calculation for Table X<sub>3</sub> PT. AirAsia Indonesia, Tbk for the 2019-2022 period.

**Table 3**  
**Calculation of Earning Before Taxes to Total Equity PT. AirAsia Indonesia, Tbk 2019-2022**

Year	Earning Before Taxes	Total Equity	X3
2019	-61.806.971.146	202.127.259.325	-0,31
2020	-3.069.607.805.197	-2.895.139.681.363	1,06
2021	-1.938.838.760.933	-5.193.640.946.577	0,37
2022	-1.643.423.868.491	-6.815.306.852.652	0,24

Source: Data processed

Based on the table above, the highest ratio value occurred in 2021 at 1.06, while the lowest was in 2019 at -0.31. The ratio of profit before tax to total equity has decreased. In 2019, the X ratio<sub>3</sub> The obtained value is -0.31, which means that every Rp. 1,- used from capital can produce a profit before tax of -0.31. Then, in 2020, the X ratio value amounting to 1.06, which means that every Rp. 1,- used from capital can produce a profit before tax of 1.06. Furthermore, in 2021, the value of the X ratio will decrease, amounting to 0.37, which means that every Rp. 1,- used from capital can produce

a pre-tax profit of 0.37. In 2022, the value of the X ratio will decrease again, amounting to 0.24, which means that every Rp. 1,- used from capital can produce a profit before tax of 0.24.

**Cash Flow From Operation to Total Liabilities**

This ratio is used to measure a company's solvency or the company's ability to generate sufficient cash to pay all company obligations. The larger the ratio value, the better the company's performance; conversely, the smaller the ratio, the worse the company's performance. The following is the calculation for Table X<sub>4</sub> PT. AirAsia Indonesia, Tbk for the 2019-2022 period.

**Table 4**  
**Calculation of Cash Flow From Operation to Total Liabilities PT. AirAsia Indonesia, Tbk 2019-2022**

Year	Cash Flow From Operation	Total Liabilities	X4
2019	-972.470.949.252	2.410.942.815.607	-0,40
2020	109.997.328.596	8.959.223.339.425	0,01
2021	31.699.278.032	10.330.589.763.360	0,00
2022	498.672.662.685	12.172.269.741.814	0,05

Source: Data processed

Based on the table above, in 2019-2022, there has been an increase every year. In 2019, the X ratio value amounted to -0.40, which means that every Rp. 1- used from debt can generate operating cash of -0.04. Furthermore, in 2020, the value of the X ratio amounted to 0.01, an increase from the previous year, which means that every Rp. 1,- used in debt can generate operating cash of 0.01. In 2021, the value of the X ratio<sub>4</sub> decreased from the previous year by 0.00. Then, in 2022, the X ratio value of 0.05 increased, meaning that every Rp. 1- used from debt can generate operating cash of 0.05.

**Total Liabilities to Total Assets**

This ratio is used to measure the company's ability to pay its obligations through

the total assets it owns. The smaller the total debt a company has, the lower the company's burden in repaying loans. On the other hand, the more outstanding the total debt the company has, the higher its burden in repaying its loans. The following is the X calculation Table PT. AirAsia Indonesia, Tbk 2019-2022 Period.

**Table 5**  
**Calculation of Total Liabilities to Total Assets PT. AirAsia Indonesia, Tbk 2019-2022**

Year	Total Liabilities	Total Asset	X5
2019	2.410.942.815.607	2.613.070.074.932	0,92
2020	8.959.223.339.425	6.064.083.658.062	1,48
2021	10.330.589.763.360	5.136.948.816.783	2,01
2022	12.172.269.741.814	5.356.962.889.162	2,27

Source: Data processed

The table above shows that the highest ratio occurred in 2022 at 2.27 and the lowest in 2019 at 0.92. The ratio of total liabilities to total assets has increased every year. In 2019, the value of X<sub>5</sub> amounted to 0.92, which means that every Rp. 1,- of total debt can be used as the total available assets. Furthermore, in 2020, the value of X<sub>5</sub> amounted to 1.48, an increase from the previous year, which means that every Rp. 1,- of total debt can be used as the total available assets. Then, in 2021, the X ratio value amounting to 2.01 increased again, meaning that every Rp. 1- of total debt can be used as the total available assets. In 2022, the X ratio value will again increase by 5, amounting to 2.27, which means that every Rp. 1- of total debt can be used as total available assets.

**Current Liabilities to Total Assets**

This ratio is used to measure the level of a company's ability to pay the company's current liabilities through the total assets it owns. The greater the current liabilities compared to total assets, the higher the company's burden in repaying loans. On the other hand, the smaller the current liabilities compared to total assets, the lower the company's burden in repaying loans. The following is the X calculation table<sub>6</sub> PT. AirAsia Indonesia, Tbk 2019-2022 Period.

**Table 6**

**Calculation of Current Liabilities to Total Assets PT. AirAsia Indonesia, Tbk 2019-2022**

Year	Current Liabilities	Total Asset	X6
2019	1.986.534.474.236	2.613.070.074.932	0,76
2020	4.957.130.972.939	6.064.083.658.062	0,82
2021	6.601.734.213.455	5.136.948.816.783	1,29
2022	7.454.518.137.308	5.356.962.889.162	1,39

Source: Data processed

The table above shows that the highest ratio value occurred in 2022 at 1.39 and the lowest in 2019 at 0.76. The ratio of current liabilities to total assets has increased every year. In 2019, the X ratio value amounted to 0.76, which means that every Rp. 1- of total current debt can be used as a total available asset of 0.76. In 2020, the X ratio value amounted to 0.82, which means that every Rp. 1- of total current debt can be used as a total available asset of 0.82. Then, in 2021, there was an increase from the previous year, which had a ratio value of 1.29, which means that every Rp. 1,- of total current debt can be used as a total available asset of 1.29. Furthermore, in 2022, the value of the X ratio<sub>6</sub> experienced an increase again from the previous year, which means that every Rp. 1.- of total current debt can be used as a total available asset of 1.39. X Ratio<sub>6</sub>, which is increasing, shows that the company's ability not to pay debt will be high.

**Log Fixed Assets**

This ratio is used to measure how much-fixed assets the company owns. Using logarithms aims to reduce excessive data fluctuations; the number of fixed assets with a value of hundreds of billions or trillions will be simplified without changing the proportion of the actual number of fixed assets. The following is a table for calculating the X value<sub>7</sub> PT. AirAsia Indonesia, Tbk for the 2019-2022 period.

**Table 7**  
**PT. Fixed Assets Log Calculation. AirAsia Indonesia, Tbk 2019-2022**

Year	Current Liabilities	X7
2019	1.667.164.853.540	12,22
2020	5.891.422.989.398	12,77
2021	4.971.401.715.680	12,70

2022 5.069.480.768.587 12,70

Source: Data processed

Based on the table above, the X ratio value increased quite a bit from 2019 to 2022. In 2019, the value of the X ratio was 12.22. Then, in 2020, the X ratio value increased to 12.77. Furthermore, in 2021, the value of the X ratio<sub>7</sub> decreased to 12.70, and in 2022, the X ratio value<sub>7</sub> remained stable at 12.70. The greater the value of the X ratio<sub>7</sub>, the better the value of the assets owned by the company. Companies must be able to maximize the value of their fixed assets effectively and efficiently so that the fixed assets they own impact the company.

**Working Capital to Total Liabilities**

This ratio measures the company's ability to use its working capital to guarantee its obligations—the more influential the management of company funds towards debt, the better its performance. The following is a table for calculating the X value PT. AirAsia Indonesia, Tbk for the 2019-2022 period.

**Table 8**  
**Calculation of Working Capital to Total Liabilities PT. AirAsia Indonesia, Tbk 2019-2022**

Year	Working Capital	Total Liabilities	X8
2019	- 1.040.629.252.844	2.410.942.815.607	-0,43
2020	- 4.784.470.304.275	8.959.223.339.425	-0,53
2021	- 6.436.187.112.352	10.330.589.763.360	-0,62
2022	- 7.167.036.016.733	12.172.269.741.814	-0,58

Source: Data is processed

Based on the table above, the X ratio value decreased yearly, and a negative ratio value was obtained. In 2019, the X ratio value was -0.43. Then, in 2020, the X ratio value decreased again to -0.53. Furthermore, in 2021, the value of the X ratio decreased again to -0.62. In 2022, the value of the X ratio<sub>8</sub> had a slight increase, although it still obtained a negative value of -0.58; this was due to the acquisition of working capital being smaller than total debt, which obtained a pretty significant value.

**Log EBIT to Interest Expenses**

This ratio measures the company's EBIT ability to pay loan interest obligations. If the value of the ratio is higher, the company will be more capable of paying its obligations. On the other hand, if the ratio value is smaller, the company's ability to pay loan interest will not be good. The following is the X calculation table<sub>9</sub> PT. AirAsia Indonesia, Tbk for the 2019-2022 period.

**Table 9**  
**Calculation of Log EBIT to Interest Expenses PT. AirAsia Indonesia, Tbk 2019-2022**

Year	Log EBIT	Interest Expenses	X9
2019	113.942.790	65.293.914.766	0,00
2020	-2.803.061.345.665	267.246.207.693	-10,49
2021	-1.676.348.751.146	262.607.204.936	-6,38
2022	-1.315.662.969.114	328.559.903.302	-4,00

Source: Data processed

Based on the table above, unstable increases and decreases occurred. In 2019, the X ratio value<sub>9</sub> obtained a value of 0.00. Then, in 2020, the X ratio value<sub>9</sub> experienced a decline to obtain a negative profit of -10.49. Furthermore, in 2021, the value of the X ratio<sub>9</sub> experienced an increase even though it still achieved a negative profit of -6.38, which was better than the previous year. In 2022, the value of the X ratio<sub>9</sub> increased again to -4.00. Because interest rates continue to increase but are not followed by increased profits, management must improve the company's performance.

To find out the results of the bankruptcy prediction of PT. AirAsia Indonesia, Tbk with the Fulmer model for 2019-2022 can be seen in the following table:

**Table 10**  
**Analysis Results Using the Fulmer PT Model. AirAsia Indonesia, Tbk 2019-2022**

Variable	2019	2020	2021	2022
X1	-13,38	-8,40	-12,44	-13,65
X2	0,54	0,06	0,03	0,15
X3	-0,02	0,00	0,00	0,00
X4	-0,51	0,01	0,00	0,05
X5	0,11	0,18	0,24	0,27

X6	1,77	1,91	3,01	3,25
X7	7,03	7,34	7,30	7,30
X8	-0,47	-0,57	-0,67	-0,63
X9	0,00	-9,38	-5,70	-3,58
H-Score	-11,23	-15,29	-14,79	-13,46
Interpretation	Bankrupt	Bankrupt	Bankrupt	Bankrupt

Source: Data processed

The calculation table above shows that PT. AirAsia Indonesia, Tbk, in 2019-2022, was in bankruptcy with an average H-Score value below 0 (zero) and obtained a negative number. The highest H-Score value occurred in 2019 at -11.23, and the lowest value occurred in 2020 at -15.29. This resulted in PT. AirAsia is predicted to experience bankruptcy in the following years.

**Model Taffler**

In the Taffler model, there are four indicators analyzed, namely:

**Earning Before Taxes to Current Liabilities**

This ratio is used to measure the company's ability to generate profits before tax with total current liabilities. The lower the ratio value, the less likely it is that profit before tax can cover the company's current liabilities. On the other hand, if the ratio value is higher, it is more likely that the company can cover its current liabilities using profit before tax. The following is the X calculation Table PT. AirAsia Indonesia, Tbk for the 2019-2022 period.

**Table 11**  
**Calculation of Earning Before Taxes to Current Liabilities PT, AirAsia Indonesia, Tbk 2019-2022**

Year	Earning Before Taxes	Current Liabilities	X1
2019	-61.806.971.146	1.986.534.474.236	-0,03
2020	-3.069.607.805.197	4.957.130.972.939	-0,62
2021	-1.938.838.760.933	6.601.734.213.455	-0,29
2022	-1.643.423.868.491	7.454.518.137.308	-0,22

Source: Data processed

Based on the table above, it can be seen that in 2019, the value of the X ratio amounted to -0.03, which means that every Rp. 1- obtained from profit before tax can cover the company's current liabilities of -0.03. Then in 2020, the X ratio value<sub>2</sub> experienced a decrease of -0.62, which means that every Rp. 1- obtained from profit before tax can cover the

company's current liabilities of -0.62. Furthermore, in 2021, the value of the X ratio amounted to -0.29, which means that every Rp. 1- obtained from profit before tax can cover the company's current liabilities. In 2022, the value of the X ratio<sub>1</sub> experienced an increase again, although it still obtained a negative value of -0.22, which means that every Rp. 1- obtained from profit before tax can cover the company's current liabilities.

**Current Assets to Current Liabilities**

This ratio is used to measure the company's ability to fulfill all its current obligations using current assets. The more excellent the ratio value, the better the company's performance. Conversely, the smaller the ratio value, the worse the company's performance. The following is the X calculation Table PT. AirAsia Indonesia, Tbk for the 2019-2022 period.

**Table 12**  
**Calculation of Current Assets to Current Liabilities PT. AirAsia Indonesia, Tbk 2019-2022**

Year	Current Assets	Current Liabilities	X2
2019	945.905.221.392	1.986.534.474.236	0,48
2020	172.660.668.664	4.957.130.972.939	0,03
2021	165.547.101.103	6.601.734.213.455	0,03
2022	287.482.120.575	7.454.518.137.308	0,04

Source: Data processed

Based on the table above, the ratio of current assets to current liabilities is experiencing instability. In 2019, the X ratio value<sub>2</sub> amounted to 0.48, which means that every Rp. 1- of current liabilities is guaranteed by 0.48 of current assets. Then, in 2020, the X ratio value is 0.03; in 2021, it has the same ratio value of 0.03, meaning that every Rp. 1- of current liabilities is guaranteed by 0.03 of current assets. Furthermore, in 2022, there will be a slight increase in the ratio value of 0.04, which means that every Rp. 1- of current liabilities is guaranteed by 0.04 of current assets.

**Current Liabilities to Total Assets**

This ratio measures the company's ability to pay its current liabilities through its total assets. The following is the X calculation

Table PT. AirAsia Indonesia, Tbk for the 2019-2022 period

**Table 13**  
**Calculation of Current Liabilities to Total Assets PT. AirAsia Indonesia, Tbk 2019-2022**

Year	Current Liabilities	Total Assets	X3
2019	1.986.534.474.236	2.613.070.074.932	0,76
2020	4.957.130.972.939	6.064.083.658.062	0,82
2021	6.601.734.213.455	5.136.948.816.783	1,29
2022	7.454.518.137.308	5.356.962.889.162	1,29

Source: Data processed

Based on the table above, the highest values occurred in 2021 and 2022, with an X ratio value of the same amount of 1.29, and the lowest value occurred in 2019 at 0.76. In 2019, the X ratio value <sub>3</sub> amounted to 0.76, which means that every Rp. 1- of total current debt can be used as a total available asset of 0.76. Then in 2020, the X ratio value <sub>3</sub> amounted to 0.82, which means that every Rp. 1- of total current debt can be used as a total available asset of 0.82. Furthermore, in 2021 and 202, it will have an X ratio value which is the same as 1.29, which means that every Rp. 1- of total current debt can be used as a total available asset of 1.29.

**Sales to Total Assets**

This ratio shows management's efficiency in using all company assets to generate sales. The following is the X calculation Table PT. AirAsia Indonesia, Tbk for the 2019-2022 period.

**Table 14**  
**Calculation of Sales to Total Assets PT. AirAsia Indonesia, Tbk 2019-2022**

Year	Sales	Total Assets	X4
2019	6.708.800.607.590	2.613.070.074.932	2,57
2020	1.610.973.387.045	6.064.083.658.062	0,27
2021	626.001.737.959	5.136.948.816.783	0,12
2022	3.780.525.920.680	5.356.962.889.162	0,71

Source: Data processed

The table above shows that the highest ratio occurred in 2019 at 2.57 and the lowest in 2021 at 0.12. In 2019, the X ratio value

amounted to 2.57, which means that every Rp. 1,- total assets can generate 2.57 sales. Furthermore, in 2020, the value of the X ratio<sub>4</sub> amounted to 0.27, a decrease from the previous year, which means that every Rp. 1- of total assets can generate 0.27 sales. Then, in 2021, the X ratio value amounted to 0.12, a decrease from the previous year, meaning that every Rp. 1- of total assets can generate 0.12 sales. In 2022, the value of the X ratio<sub>4</sub> amounted to 0.71, a reasonably significant increase compared to the previous year, which means that every Rp. 1- of total assets can generate 0.71 sales. This ratio experiences unstable increases and decreases because the company's sales are smaller than the company's total assets.

To find out the bankruptcy prediction results of PT. AirAsia Indonesia, Tbk for the 2019-2022 period using the Taffler model can be seen in the following table:

**Table 15**  
**Analysis Results Using the PT Taffler Model. AirAsia Indonesia, Tbk 2019-2022**

Variable	2019	2020	2021	2022
X1	-0,02	-0,33	-0,15	-0,12
X2	0,06	0,00	0,00	0,00
X3	0,14	0,15	0,23	0,23
X4	0,41	0,04	0,02	0,11
T-Score	0,59	-0,14	0,10	0,22
Interpretation	Not Bankrupt	Bankrupt	Bankrupt	Grey Area

Source: Data processed

Based on the calculation table above using the Taffler model shows that PT. AirAsia Indonesia, Tbk in 2019-2022 experiences differences every year. In 2019, it obtained a score of 0.59 and was in a non-bankrupt condition with an average score of more than 0.3. Then, in 2020, it got a value of -0.14; in 2021, it got a value of 0.10, being in bankruptcy with an average value of less than 0.2. Furthermore, in 2022, it will get a value of 0.22 in the gray area with an average value between 0.2 – 0.3. This resulted in the company predictably experiencing bankruptcy in the following years.

**CONCLUSIONS AND RECOMMENDATIONS**

**AND**

## Conclusion

It is based on the results of calculations using the Fulmer and Taffler models at the company PT. AirAsia Indonesia, Tbk, for the 2019-2022 period, obtained a slightly different result in the Fulmer model analysis of the company PT. AirAsia Indonesia, Tbk is predicted to experience bankruptcy in 2019-2022 because it produces a value of less than 0, so it can be said that the company is in an unhealthy condition or has the potential to experience bankruptcy in the future. Meanwhile, in the analysis of the Taffler model of the company PT. AirAsia Indonesia, Tbk has several differences; in 2019, the company was declared not to be in bankruptcy, and 2020-2021, the company was declared to be in bankruptcy. In 2022, the company is in the gray area, which allows the company to recover or potentially go bankrupt. This shows that the company is still unable to manage its finances well due to a decrease in the number of passengers and a reduction in flight schedules, which causes losses and an increase in the amount of debt each year, potentially experiencing bankruptcy in the following years.

## Suggestion

As for suggestions for company management, it is hoped that they can carry out evaluations by paying more attention to operational activities carried out and be able to make a better contribution in obtaining profitability so that the company does not experience bankruptcy in the future because the decisions taken by company management can determine its sustainability. Company life.

For future researchers who want to take on the same topic of bankruptcy prediction, it is recommended to increase the research period so that they can be seen to be longer in detecting bankruptcy and add other prediction models to predict bankruptcy, as well as being able to compare prediction results between several models.

## BIBLIOGRAPHY

Ananto, R. P., Sriyuniati, F., & Ferdawati. (2020). Financial Distress Prediction Using the Fulmer Model (Study at PT.

Semen Padang). *Dharma Andalas Journal of Economics and Business*, 22(1), 110–119.

<https://jurnal.unidha.ac.id/index.php/JEBD/article/view/65/63>

Dewi Buchari, P., Murni, S., & Untu, V. N. (2023). Financial Distress Analysis Using Altman Z-Score, Springate, and Zmijewski Analysis Models. *EMBA Journal*, 11(3), 113–125.

Gunawan, D., & Warninda, T. D. (2022). Financial Distress Prediction Using the Taffler and Grover Model in Companies Affected by the Covid-19 Pandemic. *Journal of Business, Management, and Technosociopreneurship*, 1(1), 01–15. <https://doi.org/10.31326/bimtek.v1i1.1109>

Hernawaty, H., Sari, I. K., & Rioni, Y. S. (2021). Bankruptcy Prediction Analysis Using the Altman Z-Score Method at Pt. Ramayana Lestari Sentosa Tbk. *Journal of Business & Public Accounting*, 11(2), 80–90.

Ilamutia, L. F., Affan, N., & Setiawati, L. (2023). *Bankruptcy Analysis in Manufacturing Companies Registered on the IDX Using the Altman Z-Score Analysis of Bankruptcy Model*. 2(2), 247–257.

Mariani, D., Utara, P., & Lama, K. (2018). *Journal of Accounting and Finance Vol. 7 No. 1 April 2018 FEB Budi Luhur University ISSN: 2252 7141*. 7(1), 59–78.

Masdiantini, P. R., & Warasniasih, N. M. S. (2020). Financial Reports and Company Bankruptcy Predictions. *Scientific Journal of Accounting*, 5(1), 196. <https://doi.org/10.23887/jia.v5i1.25119>

Muda, I, D.Y. Wardani, Erlina, A. Maksum, A.F.Lubis & R.Bukit. (2017). The Influence of Human Resources Competency and The Use of Information

Technology on The Quality of Local Government Financial Report with Regional Accounting System as an Intervening. *Journal of Theoretical and Applied Information Technology*. 95(20). 5552-5561.

<http://www.jatit.org/volumes/Vol95No20/23Vol95No20.pdf>

- Nurcahya, Y. A., & Dewi, R. P. (2020). Financial Report Analysis as a Tool for Assessing Company Financial Performance at PT Multi Bintang Indonesia Tbk. *Scientific Journal of Accounting and Finance*, 9(2), 83–95. <https://doi.org/10.32639/jiak.v9i2.423>
- Putri, N. K. A. R., & Werastuti, N. S. D. (2020). Analysis of the Fulmer and Grover Model in Predicting Financial Distress in the Consumer Goods Industry. *Accounting Student Scientific Journal) Ganesha Education University*, 11(3), 733–745.
- Riani, M., (2020). The Analysis of the Influence of financial performance on stock prices with earning growth as a moderating variable in infrastructure, utility and transportation sector companies listed on the Indonesia Stock Exchange. *International Journal of Innovative Science and Research Technology*, 5(5), 18.
- Wulansari, M. (2022). Bankruptcy Prediction Analysis Using the Altman Z-Score Method at Pt. Astra Otoparts Tbk. *Familiar Champion: Journal of Social Sciences*, 7(4), 268. <https://doi.org/10.58487/akrabjuara.v7i4.1958>