

BANKRUPTCY PREDICTION ANALYSIS OF PT GARUDA INDONESIA TBK (2018-2023) USING THE FULMER MODEL (H-SCORE)

Mardiana¹, Muhammad Fauzan², Lilis Karlina³, Syafrina Dina⁴

^{1,2,3,4}Management Study Program, Faculty of Economics and Business, Universitas Indragiri Islamic, Indonesia

*e-mail: mardianadian2909@gmail.com

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Abstract

The COVID-19 pandemic has had a very significant economic impact, with millions of people losing jobs and income, especially in the air transportation (aviation) sector. One of the leading aviation companies in Indonesia that has been affected by the COVID-19 pandemic is PT Garuda Indonesia Tbk. The aim of this research is to evaluate the risk of company bankruptcy using the Fulmer Model (H-Score) with a pre-pandemic (2018-2019), pandemic (2020-2021), and post-pandemic perspective.pandemic (2022-2023). The research method used is a quantitative descriptive method with secondary data sources. The data collection techniques used are literature study, online data search, and documentation. The research results show that there is a significant risk of bankruptcy at PT Garuda Indonesia Tbk during the 2018-2023 period. The risk of bankruptcy increases during the pandemic period, with the risk peaking at the start of the post-pandemic period. The risk of bankruptcy in the post-pandemic period is higher compared to the pre-pandemic period. This indicates that PT Garuda Indonesia Tbk is facing high financial vulnerability, especially during and after the COVID-19 pandemic.

1. INTRODUCTION

Background Problem

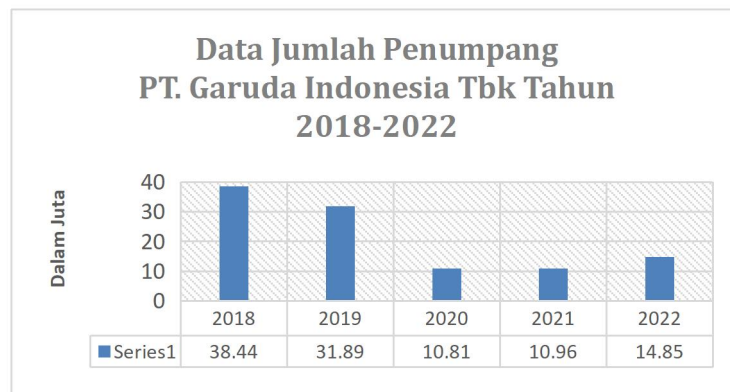
COVID-19, the disease caused by the SARS-CoV-2 virus, first appeared in Wuhan, China in late 2019. Since then, the virus has spread rapidly throughout the world, infecting millions of people and claiming hundreds of thousands of lives. The COVID-19 pandemic has had a significant impact on various aspects of life, including health, economic and social. The economic impact of this pandemic has been felt, with millions of people losing jobs and income, especially in the air transportation (aviation) sector.

Air transport represents only a small portion of GDP but is closely linked to the activities of other sectors, especially airports and aircraft manufacturing which are collectively considered the "aviation industry". The aviation industry is a major driver of many other economic activities. The outbreak of the corona virus which causes the disease COVID-19 has also affected the world of aviation. Changes in passenger behavior following the COVID-19 crisis, travel restrictions and the ensuing economic crisis resulted in a drastic reduction in demand for aviation services. Airline companies were in a very different situation before the COVID-19 crisis began. In particular, air transport is one of the sectors with the highest dispersion in productivity across companies and, to a lesser extent, in terms of profitability.

Based on an article from the 2020 OECD Policy Responses to Coronavirus (COVID-19), changes in passenger behavior after the COVID-19 crisis, travel restrictions and the ensuing economic crisis resulted in a drastic decline in demand for aviation services. According to IATA, Passenger air freight revenue based on passenger kilometers fell 90% year-on-year in April 2020 And down 75% in August. The fall in economic and trade activity had an impact on freight transport, which fell by almost 30% compared to the previous year in April And down about 12% in August 2020. Airline companies entered this crisis with very different abilities to deal with shocks and varying future prospects.

The magnitude of the shock has put airlines' liquidity buffers under pressure, even though most costs are variable (around 50% according to IATA, especially fuel which accounts for 25% of total costs). The decline in oil prices that occurred in the initial period of the pandemic has reduced airline operational costs. Although reducing operational costs can help reduce financial pressure, the risk of bankruptcy remains elevated due to a significant decline in revenues. Although variable costs have decreased, a larger decrease in revenue can cause an imbalance between revenue and costs, which can put the company at risk of bankruptcy.

One of the leading aviation companies in Indonesia that has been affected by the COVID-19 pandemic is PT. Garuda Indonesia Tbk. This can be seen from data on the development of the number of PT passengers. Garuda Indonesia Tbk for 2018-2022 is as follows:



Source : statista.com (2024)

Based on the diagram above, it can be seen the development of the number of PT passengers. Garuda Indonesia Tbk in 2018, the number of passengers reached 38.44 million people, showing a high level of occupancy. Then, the number of passengers experienced a significant decline in 2019 to 31.89 million people. This decline continued in 2020 and 2021, where the number of passengers was only around 10.81 million and 10.96 million, illustrating the significant impact of the COVID-19 pandemic on the aviation industry as a whole. In

2022, there will be a significant increase in the number of passengers to 14.85 million, indicating a recovery that has occurred in line with the adoption of safety protocols and the easing of travel restrictions, however this increase is still below the average number of passengers in the period before the pandemic occurred.

Garuda Indonesia experienced a significant decline in passenger numbers during the start of the COVID-19 pandemic, in line with global trends in the aviation industry. Despite an increase in passenger numbers in 2022, the level filled Garuda Indonesia's (seat load factor) based on Statista.com data (2024) only reached 72.94%, lower than the average for global commercial airlines which has exceeded 80%. This phenomenon shows that Garuda Indonesia is greatly affected by external conditions such as the pandemic, with a drastic decline in the number of passengers, especially in 2020 and 2021, which indicates major financial pressure, especially in terms of revenue.

As one of the main players in the Indonesian aviation industry, PT. Garuda Indonesia is an important concern in evaluating the company's potential bankruptcy. The pattern of changes in Garuda Indonesia's income can provide a comprehensive picture of the company's financial condition and operational stability. Tracing the dynamics of Garuda Indonesia's revenue over time allows us to identify early indications that may indicate the risk of financial difficulties it is facing. The following is the development of PT income data. Garuda Indonesia:

Chart 1. Gross Income of PT. Garuda Indonesia Tbk 2018-2023



Source: idx.com (2024)

Based on the table above, it shows that Garuda Indonesia's revenue experiences significant fluctuations from year to year. In 2018 and 2019, revenue showed a steady increase. However, in 2020, income suddenly dropped drastically. This can be directly attributed to the COVID-19 pandemic which has restricted air travel and reduced passenger demand. This decline in revenue reflects the direct impact of the pandemic on the aviation industry as a whole. The company's revenue declined further in 2021. This shows that the company still faces challenges in returning its revenue to pre-pandemic levels. However, there is a significant increase in 2022 and 2023, reflecting the company's efforts to overcome the impact of the pandemic and pursue a return to growth. The drastic decline in revenue in 2020, which is directly related to the COVID-19 pandemic, indicates that Garuda Indonesia is facing significant financial pressure. Large revenue losses can put pressure on a company's profitability and liquidity, especially if fixed costs increase. This could be one of the factors that increases the risk of company bankruptcy, especially if no significant corrective action is taken.

Apart from tracing the dynamics of company revenues to identify early indications of the risk of financial difficulties faced, the dynamics of company profits (losses) also need to be identified. The following is the development of profit (loss) of PT Garuda Indonesia Tbk:

Chart 2: Development of Profit (Loss) PT. Garuda Indonesia Tbk. 2018-2023



Source : garudaindonesia.com (2024)

Based on the graph above, it shows that there are fluctuations in PT Garuda Indonesia's net profit from 2018 to 2023, reflecting the instability of the company's performance, which is greatly influenced by the COVID-19 pandemic. Large losses in 2018 were followed by improvement in 2019, but the pandemic caused very large losses in 2020 and 2021. Although there was a significant recovery with positive net income in 2022, a decline occurred again in 2023. These fluctuations indicate a significant risk of bankruptcy, as the company faces challenges in maintaining consistent profits and covering operational costs and debt. Large losses during the pandemic demonstrate vulnerability to changing market conditions, reinforcing the relevance of potential bankruptcy analysis and the importance of adaptive strategies in facing the challenges of an ever-changing aviation industry.

Bankruptcy can be interpreted as a failure that occurs within a company. According to Rudianto (2013) in Nurmulina, et al (2023) Bankruptcy is the inability of a company to pay its financial obligations when they are due which causes bankruptcy or liquidity difficulties which may be the beginning of bankruptcy. A company is declared bankrupt if the total assets owned by the company are unable to cover any obligations that must still be fulfilled by a company. According to Prabowo (2019), bankruptcy may be experienced by all companies, so companies must anticipate this by making bankruptcy predictions.

Several previous research results have been carried out to analyze bankruptcy predictions using various analytical methods. Research related to bankruptcy analysis on Garuda Indonesia has also been carried out. Research by Nurmulina, et al (2023) uses the Springate (S-Score) method to determine the factors that cause bankruptcy. The research results show that the company has the potential to go bankrupt because in 2018-2020 its current assets are quite low so the company does not have the ability to pay its debts. (Nurmulina et al., 2023). In this research, researchers used the Fulmer method (H-Score) with a research time span of 2018-2023.

Another research by Kamila & Purwaningrum (2023) on the aviation company PT. AirAsia Indonesia uses the Springate method and the Zmijewski method to determine indications of occurrence *financial distress* before COVID-19 (2018-2019) and during COVID-19 (2020-2021). The results of this research explain that the aviation company PT. AirAsia Indonesia Tbk is in a situation *financial distress* in the situation before and after COVID-19 (Kamila & Purwaningrum, 2023). Based on this research, researchers are interested in researching other airline companies, namely PT. Garuda Indonesia Tbk, uses a different method, namely the Fulmer method (H-Score), to see the potential for bankruptcy company. Apart from that, this research also uses an additional research time span, namely the years before COVID-19 (2018-2019), during COVID-19 (2020-2021), and after COVID-19 (2022-2023) to see a comparison of the potential for company bankruptcy. in the research period.

Based on the description above, researchers are interested in conducting further research regarding the bankruptcy prediction of PT Garuda Indonesia Tbk using the Fulmer method (H-Score). The results of this research will be described in a research report entitled **"Bankruptcy Prediction Analysis of PT Garuda Indonesia Tbk (2018-2023) Using the Fulmer Model (H-Score)."**

Problem Formulation

Based on the background of the problem mentioned above, the problem formulation in this research is:

1. Is there a risk of bankruptcy of PT Garuda Indonesia Tbk. based on the Fulmer analysis method (H-Score) for the 2018-2023 period?
2. Is there a significant difference in the bankruptcy risk of PT Garuda Indonesia Tbk. in the pre-pandemic, pandemic and post-pandemic periods?

Research Purposes

Based on the problem formulation above, it can be concluded that the objectives of this research are:

1. To find out the risk of bankruptcy of PT Garuda Indonesia Tbk. using the Fulmer analysis method (H-Score) during the 2018-2023 period.
2. To identify and analyze significant differences in the bankruptcy risk of PT Garuda Indonesia Tbk. in three main periods: pre-pandemic, pandemic, and post-pandemic.

2. LITERATURE REVIEW

Financial Management

Financial management is the heart of every organization, playing an important role in determining success or failure. Having a good understanding of financial management is key for business leaders to achieve organizational goals.

According to Berry, et al. (2023), financial management is a science that regulates financial management in an institution, including a company or business, with the main aim of maximizing company value, maintaining financial stability, and minimizing current and future risks. (Berry et al., 2023).

Horne's definition and Wochowiez (2012) in Sari, et al (2024) regarding financial management as planning, organizing, directing and controlling a company's financial activities to achieve certain goals (Sari et al., 2024). Careful planning and control, as emphasized in Horne's definition and Wochowiez, helps companies identify and manage their financial risks effectively.

Thus, financial management covers various important aspects, from maximizing company value to managing financial risks. A comprehensive understanding of financial management is critical to organizational success.

Signalling Theory

According to Brigham & Houston (2016) in Goh (2023), signaling theory explains the reasons why companies convey financial information to the capital market. This signal theory states that company management acts as an agent who must convey financial information to external parties. According to this theory, a company is considered quality if it is able to provide clear signals to the market.

In signaling theory, financial reports can be used to provide positive signals (good news) or negative signals (bad news) to users of the report. Based on this financial information, investors or potential investors can decide whether they will invest in the company or not. External parties generally want information about the company's good prospects (good news). In signaling theory, it is hoped that the market will be able to differentiate the quality of companies based on the signals conveyed (Goh, 2023).

Najmi (2019) in Nasmi & Frient (2021) stated that, in the context of the signal theory in this research, if financial report analysis is used to predict bankruptcy and the results show that the company has the potential to go bankrupt, then the company will send a negative signal that will be detrimental to investors and creditors. On

the other hand, if the analysis results show that the company has no potential for bankruptcy, then the company will give a positive signal which will be profitable for investors and creditors (Nasmi & Frient, 2021).

Financial Statements

Laporan keuangan merupakan dokumen yang memuat informasi keuangan dari suatu entitas bisnis atau organisasi dalam jangka waktu tertentu. Menurut Prastowo (2011), laporan keuangan bertujuan untuk menyediakan informasi mengenai posisi keuangan, kinerja operasi, dan perubahan posisi keuangan suatu perusahaan dalam periode akuntansi tertentu (Dwi, 2011). Laporan keuangan berfungsi sebagai landasan untuk menentukan atau mengevaluasi kondisi keuangan sebuah perusahaan. Hasil analisis laporan tersebut bisa dimanfaatkan oleh pihak-pihak terkait dalam pengambilan keputusan (Lestari & Fauzan, 2023).

Financial Statement Analysis

Financial reports are an important source of information for various parties, such as investors, creditors and company management. Understanding the meaning behind the numbers in financial reports is key to effective decision making.

To make financial reports more meaningful and easy to understand, financial report analysis needs to be carried out. According to Brealey, et al. (2011) financial report analysis is a tool used by managers to monitor their own company's performance, understand competitor policies, and check customers' financial health (Brealey et al., 2011). Furthermore, Srinianingsih et al. (2023) explains that financial report analysis is a process used to assess the financial position and results of company activities in the present and past with the aim of making the most accurate estimates and predictions regarding the company's condition and performance in the future (Srinianingsih et al., 2023).

Ultimately, by knowing the financial position, owners and management can plan and make the right decisions regarding the steps that need to be taken in the future for the company. Financial statement analysis is an important tool to achieve this goal.

Bankruptcy

Management has an important role in predicting company survival. This is done by conducting analysis and forecasting to anticipate potential bankruptcy (Adnan & Kurniasih, 2000). Bankruptcy is a situation where a company is unable to pay off its obligations (This, 2011). In other words, a company is considered bankrupt if the total assets it owns are not enough to meet all the obligations that must be fulfilled. This company's inability can result in bankruptcy or liquidity difficulties which have the potential to be the beginning of bankruptcy (Rudianto in Nurmalina et al., 2023)). Because bankruptcy can be experienced by any company, companies must take anticipatory steps by predicting the possibility of bankruptcy (Prabowo, 2019).

According to Sartono (1994), bankruptcy can be caused by various factors, namely as follows: (Riadi, 2017)

- a. Technical Insolvency, namely when a company is unable to pay debts that are due, even though the value of the assets owned is higher than that the debt.
- b. Legal Insolvency, namely when the company's total debt is greater than its total assets.
- c. A condition where a company has been legally declared bankrupt because it is unable to pay all its debts.

Bankruptcy Prediction Model

Fulmer Model (H-Score)

Peter et al (2021) Fulmer in 1984 applied multiple discriminant analysis with the method *step-wise*. The results showed an accuracy rate of 98% for identifying 25 companies that had failed one year earlier, and an accuracy rate of 81% for identifying companies facing bankruptcy more than one year earlier. The formula for the Fulmer Model is as follows:

$$\text{H-Score} = 5,52 X1 + 0,212 X2 + 0,073 X3 + 1,27 X4 - 0,12 X5 + 2,335 X6 + 0,575 X7 + 1,082 X8 + 0,894 X9 - 6,075$$

The analysis criteria for this model are that if $H < 0$, then the company is predicted to be in unhealthy condition or experiencing bankruptcy, while if $H > 0$, the company is predicted to be in good or healthy condition.

The explanation regarding each variable or financial ratio based on the Fulmer Model formula is as follows:

1) *Retained Earnings to Total Assets (RETA) (X1)*

This ratio measures a company's ability to generate retained earnings from its total assets. Retained earnings are capital originating from the company's operating results which are saved before being distributed as dividends. It reflects how much of a company's earnings is not paid out as dividends to shareholders. In addition, this ratio also reflects the age of the company, because the younger the company, the less time it has had to build cumulative profits. If the company starts to experience losses, the value of retained earnings will also decrease. This ratio compares retained earnings to total assets. The value of retained earnings will decrease if the company experiences a loss. The smaller the contribution of retained earnings to total assets indicates the increased possibility of the company experiencing financial difficulties (Meiliawati, 2016). The formula for the ratio LETTER as follows:

$$\text{RETA} = \frac{\text{Retained Earnings}}{\text{Total Assets}}$$

2) *Sales to Total Assets (STA) (X2)*

The STA ratio shows a company's ability to generate sufficient business volume compared to its total investment in overall assets (Febriyandi & Amalia, 2022). *Sales to Total Asset* reflects management efficiency in utilizing all company assets to generate sales and profits. The higher the STA ratio, the better the company's performance. Sales are obtained from the income statement, while total assets come from the financial position statement. The formula for the STA ratio is as follows:

$$\text{STA} = \frac{\text{Sales}}{\text{Total Assets}}$$

3) *Earnings Before Taxes to Total Equity (EBITTE) (X3)*

Ratio EBITTE used to measure how effectively a company uses equity to generate profits before tax (Ananto et al., 2020). The higher this ratio, the faster the rate of return on capital. Conversely, the lower this ratio, the slower the rate of return on capital. Earnings before taxes are taken from the profit and loss statement, while total equity comes from the statement of financial position. The formula for the ratio EBITTE are as follows:

$$\text{EBITTE} = \frac{\text{Earnings Before Taxes}}{\text{Total Equity}}$$

4) *Cash Flow from Operations to Total Liabilities (CFOTL) (X4)*

This ratio describes the comparison between funds provided by the owner (principal) and funds borrowed from the company's creditors. This ratio aims to measure the extent to which company assets, especially current assets, are financed by total liabilities. Apart from that, this ratio also provides an indication of the level of security for lenders based on the company's operating cash flow (Ananto et al., 2020). The formula for the CFOTL ratio is as follows:

$$\text{CFTOL} = \frac{\text{Cash Flow Operations}}{\text{Total Liabilities}}$$

5) *Total Liabilities to Total Assets (TLTA)(X5)*

This ratio is used to measure the company's overall solvency or describe the company's ability to fulfill its obligations through the total assets it owns (Ananto et al., 2020). The smaller the company's total liabilities, the smaller the debt it has, so the company's burden in repaying loans is also lower. Conversely, the higher the debt a company has, the greater the company's burden in repaying loans. Total liabilities and total assets are obtained from the financial position report. The formula for the TLTA ratio is as follows:

$$TLTA = \frac{Total Liabilities}{Total Assets}$$

6) *Current Liabilities to Total Assets (CLTA) (X6)*

This ratio measures the company's liquidity or ability to pay current liabilities using the total assets it owns (Ananto et al., 2020). The higher the current liabilities compared to total assets, the greater the company's burden in repaying loans. Conversely, the lower the current liabilities compared to total assets, the lower the company's burden in repaying loans. The formula for the CLTA ratio is as follows:

$$CLTA = \frac{Current Liabilities}{Total Assets}$$

7) *Assessment Fixed Assets (X7)*

This ratio is used to measure the amount of fixed assets owned by the company, which is measured as the logarithm of total fixed assets. Fixed assets usually have a greater value compared to other types of assets, so the value is smoothed using the logarithm of fixed assets. The goal is to reduce excessive data fluctuations. By using logarithms, the amount of fixed assets worth hundreds of billions or even trillions can be simplified without changing the actual proportion of the amount of fixed assets. Effective asset management shows good company performance, while less effective asset management shows poor performance (Ananto et al., 2020). The formula for this ratio is as follows:

$$\text{Penilaian FA} = \text{LOG} (\text{Fix Assets}) \times 100 \%$$

8) *Working Capital to Total Liabilities (WCTL) (X8)*

The WCTL ratio is used to measure a company's ability to use its working capital to guarantee its obligations. The more effective the company's debt management is, the better its financial performance will be (Ananto et al., 2020). The WCTL formula is as follows:

$$WCTL = \frac{Working Capital}{Total Liabilities}$$

9) *Assessment Times Interest Earned (X9)*

The TIE log assessment is used to measure a company's EBIT ability to pay loan interest obligations. The greater this ratio, the more it shows that the company is able to pay loan interest. Conversely, the smaller this ratio, the more it shows that the company's ability to pay loan interest is not good. The formula for this ratio is as follows following:

$$\text{Penilaian TIE} = \text{LOG} \frac{EBIT}{Interest Expense}$$

Research Variable

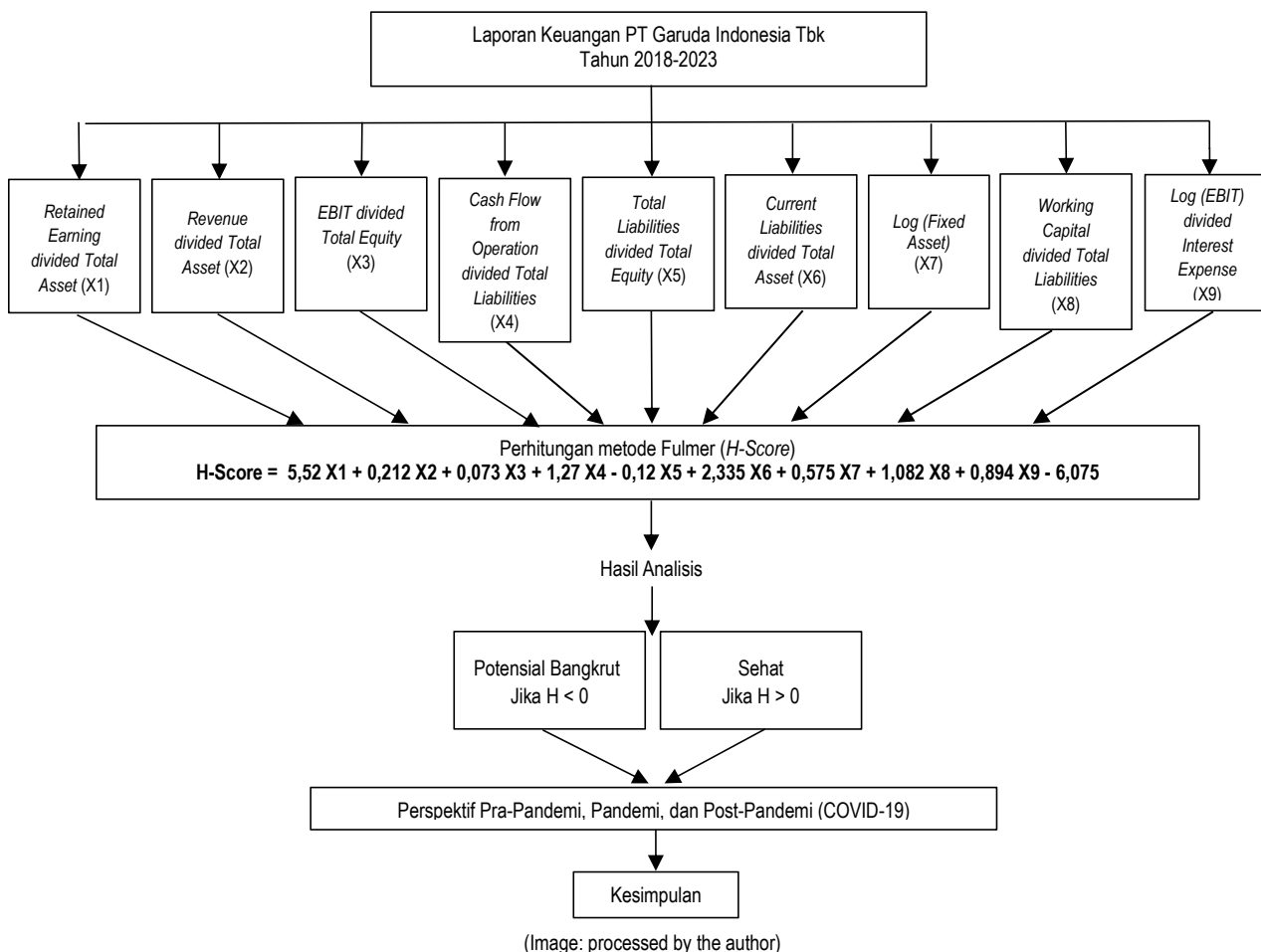
Research variables are "traits possessed by research subjects that can be measured or observed" (Sugiyono, 2017). These variables can be characteristics, conditions, or symptoms possessed by individuals, organizations, or other objects that are the focus of research. In this research, the variables used are independent variables (influencing variables) and dependent variables (influenced). The explanation of the two types of variables is as follows:

1. The independent variable (x), according to Sugiyono (2017) is often referred to as an "independent variable" or "influencing variable", is a variable that is thought to have an influence on other variables (dependent variables). This variable is manipulated or changed by the researcher to see its effect on the dependent variable.
2. The dependent variable, according to Sugiyono (2017) is often referred to as the "dependent variable" or "influenced variable", is a variable that is influenced by the independent variable. This variable is observed and measured to see changes that occur due to manipulation of the independent variable.

Thinking Framework

The thinking framework scheme is arranged as in Figure 1 below:

Gambar 1: Thinking Framework



Hypothesis

- a. PT bankruptcy risk. Garuda Indonesia Tbk. based on Fulmer analysis (H-Score) for the 2018-2023 period

PT. Garuda Indonesia (Persero) Tbk (GIAA) has experienced various significant financial challenges in recent years, which were influenced by factors such as mismanagement, allegations of corruption, and the impact of the Covid-19 pandemic.

Mismanagement and allegations of corruption are the main factors affecting Garuda Indonesia's financial condition. According to Cnbcindonesia.com (2021), this company deals with 32 aircraft lessors, much more than other airlines which usually only have 4-5 lessors. This adds to management complexity and operational costs. In addition, Garuda operates 202 aircraft of 13 different types, which causes operational inefficiencies and high maintenance costs. Many of Garuda's international flight routes are unprofitable, so the previously 437 routes were reduced to 140 to focus on routes that provide positive margins. Corruption cases related to aircraft rental contracts also caused rental costs to reach 24.7% of revenue, four times higher than other airlines.

The Covid-19 pandemic also dealt a heavy blow to Garuda Indonesia. The pandemic caused a drastic drop in passenger demand, resulting in a significant drop in monthly revenue. Travel restrictions and lockdowns mean that many flight routes have to be temporarily or completely stopped. This adds to the company's already heavy financial burden due to high operational costs.

Reporting from cnbcindonesia.com (2021), in the Working Meeting of the Minister of BUMN with Commission VI, Deputy Minister of BUMN Kartika Wirjoatmodjo explained that Garuda Indonesia was technically bankrupt, with negative equity of up to US\$2.8 billion or the equivalent of IDR 40 trillion. Garuda Indonesia's assets in 2021 reached US\$6.93 billion, while liabilities reached US\$9.76 billion, resulting in negative equity of US\$2.8 billion. The significant additional monthly debt due to the impact of the pandemic adds to the company's financial burden.

Meanwhile, as reported by Bisnis.com (2023), PT Garuda Indonesia (Persero) Tbk. (GIAA) experienced a surge in revenue in the third quarter of 2023. Operating revenues reached US\$2.23 billion or around Rp. 35.62 trillion, an increase of 48.32% compared to the previous year. However, this increase in revenue was accompanied by an increase in operating expenses which reached US\$1.99 billion, up 7.14% YoY. Flight operational and promotional expenses also experienced a significant increase. As a result, GIAA recorded a net loss of US\$72.38 million in the third quarter of 2023, a reversal from the profit achieved in the January – September 2022 period which reached US\$3.7 billion.

Garuda Indonesia's worrying financial condition is the result of various factors, such as mismanagement, allegations of corruption, and the impact of the Covid-19 pandemic. It is important for Garuda Indonesia to carry out a thorough evaluation and take appropriate steps to improve its financial performance and avoid bankruptcy.

Fulmer's analysis method includes various financial ratios used to assess the risk of bankruptcy of a company (Fulmer et al., 1984). In the context of Garuda Indonesia, several important indicators that need to be analyzed include profitability, liquidity, leverage and operational efficiency. Low or negative net profit due to high operating costs and aircraft rental indicates poor profitability. Difficulty in meeting short-term obligations due to reduced income and high debt reflects low liquidity. A high debt-to-equity ratio indicates a heavy financial burden, while a high cost per seat due to operational inefficiencies from a large number of aircraft types and unprofitable routes reflects low operational efficiency.

Based on the explanation above, there are strong indications that PT. Garuda Indonesia faces the risk of bankruptcy. Past management errors, allegations of corruption, the impact of the pandemic, and high operational costs are the main factors that reduce the company's financial performance.

H1: There is a risk of bankruptcy at PT. Garuda Indonesia Tbk. (GIAA) based on the Fulmer analysis method (H-Score) for the 2018-2023 period.

- b. Risk of bankruptcy of PT Garuda Indonesia Tbk. during the pandemic period was higher than the pre-pandemic and post-pandemic periodspandemic

The COVID-19 pandemic has resulted in a drastic decline in aviation revenue and demand. According to data from IATA, global aviation industry revenue fell 60% in 2020 compared to 2019. This decline was caused by various factors, such as travel restrictions, lockdowns, and people's concerns about traveling. A decline in revenue and demand could increase the risk of airline bankruptcy. Airlines need revenue to cover operating costs, such as employee salaries, fuel and aircraft rentals. When revenues fall, airlines can experience financial difficulties and ultimately face bankruptcy.

The difficult economic conditions during the pandemic had a major impact on PT Garuda Indonesia's performance, where in 2020 the number of Garuda Indonesia passengers for domestic flights reached 4.54 million passengers, a decrease of 70.52% compared to the number of passengers in 2019 of 15.40 million passengers. Before the COVID-19 pandemic, PT Garuda Indonesia Tbk. already experiencing financial difficulties. The company recorded a net loss of IDR 705 billion in 2019. The COVID-19 pandemic worsened the company's financial condition. In 2020, PT Garuda Indonesia Tbk. recorded a net loss of IDR 39.2 trillion.

Reporting from Kontan.co.id (2024), PT Garuda Indonesia (GIAA) recorded consolidated business revenue growth of around 40% in the 2023 performance year, reaching US\$ 2.94 billion compared to the previous year which was US\$ 2.1 billion. After going through a challenging period during the pandemic, Garuda Indonesia managed to record a profit for the year of US\$ 251.9 million. In its financial report, this business revenue was driven by scheduled flight revenue which increased 41% on an annual basis to US\$ 2.37 billion from US\$ 1.68 billion. This is in line with the increase in the use of air transportation in the post-pandemic phase which continues to approach the pre-pandemic situation.

Non-scheduled flight revenue also showed growth of 65%, reaching US\$ 288.03 million from the previous year's US\$ 174.81 million. Revenue from Hajj flights in 2023 will provide a significant contribution with an increase of 145% to US\$ 235.17 million compared to the previous year which was only US\$ 92.48 million. The President Director of Garuda Indonesia, Irfaniaputra, explained that the implementation of corporate strategic actions in an effort to accelerate post-restructuring performance recovery is expected to strengthen Garuda Indonesia's business foundation as a group. The focus is to optimize business income and record profits in a sustainable manner. Throughout 2023, Garuda Indonesia Group succeeded in increasing the number of passenger transportation by 34%, reaching 19,970,024 passengers compared to the previous period which was only 14,848,195 passengers. Of this number, Garuda Indonesia carried 8,291,094 passengers, while Citilink carried 11,678,930 passengers.

Along with the completion of the company's restructuring at the end of 2022, Garuda Indonesia also recorded other net income of US\$ 344.7 million. This income was largely contributed by the implementation of reverse impairment of non-financial assets amounting to US\$ 198 million. The debt restructuring that began at the end of 2021 has helped the company recover, after receiving approval from creditors as stipulated in a homologation agreement in 2022 which reduced the debt value by 50% from US\$ 10.9 billion to US\$ 4.79 billion.

In the pre-pandemic and post-pandemic periodspandemic, it is assumed that the risk of bankruptcy of PT Garuda Indonesia Tbk. will be lower than during the pandemic period. This is based on several assumptions, such as:

- Global economic recovery and community mobility.
- Implementation of restructuring measures by PT Garuda Indonesia Tbk.

H2: Risk of bankruptcy of PT Garuda Indonesia Tbk. during the pandemic period was higher than the pre-pandemic and post-pandemic periodspandemic.

- c. Risk of bankruptcy of PT Garuda Indonesia Tbk. in the post-pandemic period it is lower than the pre-pandemic period.

Reporting from bi.go.id (2023), the International Monetary Fund (IMF) assesses that Indonesia has demonstrated good economic recovery after the pandemic through strong macroeconomic performance, supported by the implementation of prudent monetary and fiscal policies. Policy *forward looking* and synergy have succeeded in bringing Indonesia to face global challenges in 2022 with healthy growth, reduced inflationary pressures, and a stable financial system. Bank Indonesia welcomes the results of the IMF assessment of the Indonesian economy in the 2023 Article IV Consultation report.

It is estimated that the global economy, including Indonesia, will recover after the COVID-19 pandemic, encouraging an increase in demand for flights as a result of the lifting of the lockdown policy set by the government. This is certainly a breath of fresh air for global aviation companies, including Indonesia itself.

Since the end of 2021, PT Garuda Indonesia has prepared a restructuring proposal to improve financial health and reduce total debt from 9.78 billion US dollars to 3.69 billion US dollars. This is based on the bad conditions experienced by Garuda in several periods before the proposal was made, namely poor corporate governance, including corruption and exorbitant aircraft rental costs, and a decline in Garuda's revenue of up to 70% in 2020 due to the Covid-19 pandemic. With this restructuring, it is projected that Garuda's condition will:

- Operating costs continue to be reduced and pandemic conditions improve so that income increases
- Operational performance will start to be positive in September 2022 (including the post-pandemic)

Completion The restructuring has been completed, one of which was marked by the issuance of New Debt Notes and New Sukuk on 28 and 29 December 2022. Furthermore, Garuda has also issued New Debt Instruments, as part of the restructuring scheme for creditors classified as lessors, finance lease creditors, aircraft manufacturers, MRO vendors and foreign business debt creditors who are entitled to receive new debt securities in accordance with the Peace Agreement with an initial principal amount of USD624,211,705 with a maturity period of 9 years from issuance.

In line with these various strategic steps, Garuda also recorded positive performance growth, through group passenger growth until the third quarter of 2022 of 37.05% to 10,498,823 passengers compared to the same period last year. Passenger traffic is also assessed to continue to grow by up to 30 percent towards the end of 2023 when compared to the November 2022 period. This is also reflected in Garuda's financial performance, which since mid-2022 has consistently posted positive performance.

From optimizing the availability of production equipment, by the end of 2022, Garuda can operate around 53 fleets. Reporting from Bisnis.com (2023) PT Garuda Indonesia (Persero) Tbk. (GIAA) also targets operating a total fleet of 124 aircraft by 2023, including for its subsidiary, namely Citilink. The target for fleet operations, both Garuda Indonesia and Citilink, is one of the implementations of the company's performance recovery process, post-restructuring which will be completed in 2022. "With a target of a total of 124 Garuda Indonesia Group fleets that will operate in 2023, we are optimistic that efforts to achieve performance acceleration in the performance recovery phase, especially in the domestic market sector, can be achieved this year," explained Garuda Indonesia President Director Irfaniaputra to Bisnis, Wednesday (4/1/2023). Irfan detailed that the total fleet belonging to the group of companies includes 66 serviceable aircraft belonging to Garuda Indonesia, while the remaining 58 belong to Citilink. The issuer with the share code GIAA targets to be able to operate up to 66 serviceable aircraft through the aircraft restoration program.

Restoration efforts are supported by additional capital from State Capital Participation (PMN) worth IDR 7.5 trillion. On the other hand, the Citilink subsidiary is also aligning its performance by maximizing the optimization of the low cost carrier (LCC) aviation market potential, with a target of flying 58 aircraft by 2023. Garuda Indonesia assesses that the outlook for passenger demand for flights in 2023 will be further strengthened by the lifting of PPKM. Previously, this positive signal was supported by the high volume of people's movements during the Christmas 2022 and New Year 2023 holiday periods.

Based on data from the Ministry of Transportation (Kemenhub) command post, during the 2023 end-of-year holidays the volume of air transportation is the highest compared to other modes. As of Monday

(2/1/2023), the number of air transport passengers reached 3.2 million people from total movements by public transport, namely 10.3 million people.

The above efforts are expected to increase the company's capacity to serve more routes and passengers, which contributes to increased revenue and financial stability which results in the company having better potential to overcome financial challenges and is expected to reduce the risk of bankruptcy in the post-pandemic period compared to pre-pandemic.

H3: Risk of bankruptcy of PT Garuda Indonesia Tbk. in the post-pandemic period it is lower than the pre-pandemic period.

- d. Significant differences in the bankruptcy risk of PT Garuda Indonesia Tbk. in the pre-pandemic, pandemic and post-pandemic periods

The COVID-19 pandemic has resulted in a drastic decline in aviation revenue and demand globally. This decline was caused by various factors, such as travel restrictions, lockdowns, and people's concerns about traveling.

The impact of the COVID-19 pandemic on the aviation industry has been very significant, with a decline in global aviation industry revenues reaching 60% in 2020 compared to 2019. This decline in aviation revenues and demand has increased the risk of bankruptcy for many airlines around the world. PT Garuda Indonesia Tbk. did not escape the impact of the COVID-19 pandemic. The company's revenue experienced a drastic decline during the pandemic period. Reporting from merdeka6.com (2021), PT Garuda Indonesia Tbk experienced pressure in the first semester of 2021 due to the COVID-19 pandemic. This is in line with declining revenue performance and increasing company losses.

Based on the financial report, PT Garuda Indonesia Tbk recorded revenue of USD 696.80 million or around IDR 9.93 trillion in the first semester of 2021. Realized income fell by around 24 percent from the same period the previous year of USD 917.28 million or around IDR 13.08 trillion. This decrease was caused by a significant decrease in the number of passengers and cargo.

This decline is thought to indicate that the risk of company bankruptcy increased during the pandemic period. It is estimated that the risk of bankruptcy of PT Garuda Indonesia Tbk. in the post-pandemic period it will be lower than in the pandemic period. This is based on several assumptions, such as:

- Global economic recovery and community mobility.
- Implementation of restructuring measures by PT Garuda Indonesia Tbk.
- Increased consumer confidence in aviation.

However, the recovery of the economy and the aviation industry is still uncertain. External factors such as new variants of COVID-19 and global geopolitics can influence risk of bankruptcy of PT Garuda Indonesia Tbk. in the post-pandemic.

Based on the data and information above, it can be hypothesized that there is a significant difference in the bankruptcy risk of PT Garuda Indonesia Tbk. in the pre-pandemic, pandemic and post-pandemic periods

- Pre-pandemic period: The risk of bankruptcy is relatively low.
- Pandemic period: The risk of bankruptcy increases significantly.
- Period post-pandemic: It is estimated that the risk of bankruptcy will be lower compared to the pandemic period, but still above the level of the pre-pandemic period.

H4: There is a significant difference in the bankruptcy risk of PT Garuda Indonesia Tbk. in the pre-pandemic, pandemic and post-pandemic periods

3. RESEARCH METHODS

Place and Time of Research

This research was conducted at one of the airline companies listed on the Indonesia Stock Exchange (BEI), namely PT. Garuda Indonesia Tbk uses a bankruptcy prediction analysis method in the form of the Fulmer

method (H-Score) to assess the company's potential for bankruptcy during the 2018-2023 period with the perspective of the COVID-19 pandemic period (before, during and after the pandemic). The research will take place from May to June 2024.

Data Types and Sources

Data Type

According to Sugiyono (2017), there are two types of data, namely qualitative data and quantitative data:

- a. Qualitative data is data in the form of words, sentences, descriptions or images that are not in the form of numbers. The qualitative data used in this research are theories, company general descriptions, summaries from books, journals and others that have a direct relationship to the research title.
- b. Quantitative data is data in the form of numbers or qualitative data that is summarized. The quantitative data used in this research are the financial reports of PT. Garuda Indonesia Tbk for the 2018-2023 period.

Data Source

According to Sugiyono (2017), a data source is the place of origin of data obtained by researchers for research purposes. The data source used in this research is secondary data. Secondary data used in this research was obtained through printed books, document journals, scientific works, the internet, the Indonesia Stock Exchange (BEI) website. www.idx.co.id as well as the official website of the Garuda Indonesia Tbk company www.garudaindonesia.com in the form of PT financial reports. Garuda Indonesia Tbk for the 2018-2023 period which has a direct relationship to the research title.

Population dan Sample

Population

According to Sugiyono (2017) population is the group that is the target of research, which has certain characteristics determined by the researcher. The population in this research is the financial statements of PT. Garuda Indonesia Tbk, covering the quarters I-IV, is listed on the Indonesia Stock Exchange and on the official Garuda Indonesia website for the period 2018-2023 pre-pandemic, pandemic and post-pandemic (COVID-19) totaling 24 populations.

Sample

According to Sugiyono (2017), the sample is part of the population that is the source of data in research, where the population is part of the number and characteristics of the population. In this research, researchers chose the financial reports of PT. Garuda Indonesia Tbk, especially the balance sheet, profit and loss report and cash flow report for the first-fourth quarter of 2018-2023, as a sample for analysis.

Data Collection Techniques

Data collection techniques are a crucial step in research because they aim to obtain valid and accurate data (Sugiyono, 2019). The data collection techniques used in this research are:

- a. Documentation Study

Documentation studies are a way of obtaining data and information in the form of documents, such as books, reports, archives, images, and so on that can support research. In this research, data was obtained from company financial reports for 6 years (2018-2023) via the websites www.idx.co.id and www.GarudaIndonesia.with.

- b. Literature Study

Literature study is a series of activities to collect library data, read, record, and process research materials. This technique is used by researchers to obtain secondary data through internet browsing, reading literature, previous research results, lecture notes, and other relevant sources.

- c. Internet Search

Internet search is a research process through internet media to obtain information based on online references, journals, articles or legislation related to the object of research. This technique is carried out with the help of internet search engines to obtain information from various sources.

Data Analysis Technique

In collecting and analyzing research data, researchers follow the following steps:

- Collecting financial report data from 2018 to 2023.
- Identify related data needed to carry out calculations using the Fulmer method.
- Calculates bankruptcy analysis using the Fulmer method for each year from 2018 to 2023. The Fulmer method is calculated based on the following formula (Peter et al., 2021):

$$\text{H-Score} = 5,52 X1 + 0,212 X2 + 0,073 X3 + 1,27 X4 - 0,12X5 + 2,335 X6 + 0,575 X7 + 1,082 X8 + 0,894 X9 - 6,075 \dots\dots\dots(1)$$

Where :

- $X1 = \text{Retained Earning divided Total Asset}$
- $X2 = \text{Revenue divided Total Asset}$
- $X3 = \text{EBIT divided Total Equity}$
- $X4 = \text{Cash Flow from Operation divided Total Liabilities}$
- $X5 = \text{Total Liabilities divided Total Assets}$
- $X6 = \text{Current Liabilities divided Total Asset}$
- $X7 = \text{Log (Fixed Asset)}$
- $X8 = \text{Working Capital divided Total Liabilities}$
- $X9 = \text{Log (EBIT) divided Interest Expense}$

- Analyze calculation results using the Fulmer method based on the following criteria:

Table 2. Fulmer Method Evaluation Criteria

H	Kondisi
H-Score > 0	Sehat
H-Score < 0	Potensial bangkrut

Source : (Peter et al., 2021)

4. RESULTS AND DISCUSSION

General Description

PT Garuda Indonesia Tbk, founded on January 26 1949, is Indonesia's national airline with its head office at Soekarno-Hatta International Airport. As a member of the SkyTeam alliance and the second largest airline in Indonesia, Garuda Indonesia serves domestic and international flights to more than 60 destinations throughout Asia, Europe and Australia. More than just aviation, Garuda Indonesia is renowned for its Indonesian hospitality and world-class service. Its modern fleet of 202 aircraft, including Hajj flights, delivers passengers a feeling of comfort and safety.

Research Result

PT bankruptcy risk. Garuda Indonesia Tbk. based on Fulmer analysis (H-Score) for the 2018-2023 period

The results of the bankruptcy analysis research show the financial condition of PT. Garuda Indonesia Tbk for the 2018-2023 period, seen from various financial indicators in the Fulmer analysis method (H-Score), can be seen in the following table:

**Table 1. Fulmer method of bankruptcy analysis
PT. Garuda Indonesia Tbk 2018-2023**

Year	X1	X2	X3	X4	X5	X6	X7	X8	X9	H-Score	Prediction
2018	-0,16	1,04	-0,31	0,00	0,84	0,73	9,48	-0,56	0,19	-0,14	Bankrupt
2019	-0,15	1,02	0,20	0,13	0,83	0,73	9,52	-0,56	-	-0,92	Bankrupt
2020	-0,30	0,13	1,13	0,00	1,18	0,39	10,01	-0,29	0,59	-0,88	Bankrupt
2021	-1,03	0,18	0,64	0,00	1,84	0,80	9,83	-0,41	0,84	-4,06	Bankrupt
2022	-0,59	0,33	-2,82	0,02	0,12	0,26	9,73	-0,11	-	-4,65	Bankrupt
2023	-0,51	0,43	-0,53	0,02	1,19	0,17	9,78	-0,06	-	-2,45	Bankrupt
Average										-2,18	Bankrupt

Source: Data processed by researchers, 2024

Based on Table 1 above, the results of the bankruptcy analysis of PT. Garuda Indonesia Tbk. using the Fulmer method (H-Score) shows that in 2018-2023 the company obtained an average index of -2.38. This means the company is experiencing serious financial difficulties or serious financial distress which has the potential to go bankrupt. In this case, PT. Garuda Indonesia Tbk. shows clear and consistent indicators of bankruptcy based on the Fulmer method, with continued negative trends in key financial variables from 2018 to 2023. This indicates that the company is in very poor financial condition and continues to have difficulty maintaining healthy and profitable operations.

H-Score, which is the main indicator in the Fulmer method, shows negative values every year, indicating consistent bankruptcy. A negative value in the variable X1 (Retained Earnings/Total Assets) every year indicates that the company experiences continuous losses. The fluctuating variable X2 (Revenue/Total Assets) with a significant decline in 2020 and 2021 reflects problems with income from company assets.

Furthermore, variable X3 (EBIT/Total Equity) shows unstable profitability, with some years showing low positive values and some years negative. Variable X4 (Cash Flow from Operations/Total Liabilities) makes almost no contribution from operations to cover liabilities, which indicates a severe liquidity problem. The high values of X5 (Total Liabilities/Total Assets) and X6 (Current Liabilities/Total Assets) indicate that the company is highly leveraged and has high current liabilities relative to its assets.

The variable X7 (Log Fixed Asset) is stable, indicating not much change in fixed assets, while a negative value in X8 (Working Capital/Total Liabilities) indicates negative working capital, which is a strong indication of a liquidity problem. Lastly, X9 (Log EBIT/Interest Expense) is fluctuating and undefined in several years because the variable indicator does not meet the log calculation requirements in the X9 formula, indicating that the company is having difficulty meeting interest costs.

Previous research entitled "Prediction of Financial Distress in Non-Banking Financial Institutions in Bangladesh Using Fulmer and Springate Models" in 2020 shows that the Fulmer H-Score method is a valid and reliable tool for predicting company bankruptcy (Noor & Mustofa, 2020). According to the study, Fulmer's model had a high level of accuracy, with 98% accuracy one year before bankruptcy and 81% accuracy more than one year before bankruptcy. In addition, this study concludes that the Fulmer model is more reliable for predicting solvency in Bangladesh compared to the Springate model, because Fulmer identifies more companies as solvable which is in accordance with known company performance.

The findings of this study, which are consistent with previous research, provide strong evidence that PT. Garuda Indonesia Tbk. faces a significant risk of bankruptcy during the 2018-2023 period. Therefore, hypothesis H1 states that there is a risk of bankruptcy at PT. Garuda Indonesia Tbk. based on the Fulmer analysis method (H-Score) for the 2018-2023 period it is acceptable. The above data and analysis shows a strong indication that the company was in very poor financial condition during the period.

Risk of bankruptcy of PT Garuda Indonesia Tbk. during the pandemic period was higher than the pre-pandemic and post-pandemic periodspandemic

To test this hypothesis, analysis was carried out by comparing the H-Score and average index values for the three periods. The data used includes the pre-pandemic (2018-2019), pandemic (2020-2021), and

post-pandemic periods.pandemic (2022-2023). By observing changes in the H-Score value, it can be determined whether this hypothesis is correct. As a basis for analysis, it can be seen in the following table:

Table 2. Comparison of Bankruptcy Analysis of the Fulmer PT Method. Garuda Indonesia Tbk Pre-pandemic, pandemic and post-pandemic periods (2018-2023)

Periode	Year	H-Score Value	Average Index	Prediction
Pra-Pandemi	2018	-0,14	-0,53	Bankrupt
	2019	-0,92		
Pandemi	2020	-0,88	-2,47	Bankrupt
	2021	-4,06		
Post-pandemi	2022	-4,65	-3,55	Bankrupt
	2023	-2,45		

Source: Data processed by researchers, 2024

Based on table 2 above, researchers used H-Score value data to compare the H-Score value and average index for the three periods: pre-pandemic (2018-2019), pandemic (2020-2021), and post-pandemic (2022-2023). The H-Score value is used as the main indicator of a company's bankruptcy risk, where a lower value indicates a higher risk.

In the pre-pandemic period, the H-Score value of PT Garuda Indonesia Tbk. was -0.14 in 2018 and -0.92 in 2019, with an average index of -0.53. These values indicate that the company is in a condition that is vulnerable to bankruptcy, although not extreme. The risk of bankruptcy already exists but is still within manageable limits. The company faced financial challenges, but conditions were not as bad as in subsequent periods. In this period, bankruptcy predictions already exist but are still relatively under control.

During the pandemic period, the H-Score value shows a significant increase in bankruptcy risk with a value of -0.88 in 2020 and -4.06 in 2021, resulting in an average index of -2.47. This indicates that the risk of bankruptcy increased sharply during the pandemic, especially in 2021 where the H-Score value reached a low of -4.06, indicating a very high risk. The pandemic period had a major impact on the company's operations and finances, with a drastic decline in demand for aviation services affecting cash flow and profitability. In this period, the company experienced significant financial pressure, and predictions of bankruptcy became stronger.

In the post-pandemic, the H-Score value remains high, with 2022 recording -4.65 and 2023 recording -2.45, with an average index of -3.55. The year 2022 has the lowest H-Score value in the entire period analyzed, indicating a very high risk of bankruptcy at the start of the post-pandemic. Even though the H-Score value improves slightly in 2023, the risk of bankruptcy still remains high. The significant decline in H-Score values reflects increasing financial pressures and the company's inability to fully recover from the impact of the pandemic.

By comparing the average H-Score from these three periods, you can see that the risk of bankruptcy of PT Garuda Indonesia Tbk. it did increase during the pandemic period compared to pre-pandemic, but reached its peak at the beginning of the post-pandemic period. The average H-Score in the pandemic period (-2.47) was lower compared to pre-pandemic (-0.53), but higher compared to post-pandemic (-3.55). This shows that although risks increased sharply during the pandemic, the highest risk of bankruptcy was recorded in the early post-pandemic period. This indicates that the long-term impact of the pandemic on the company's financial condition is very significant, and recovery has not been fully achieved in the post-pandemic period.

Based on the H-Score data analysis above, it can be concluded that hypothesis H2 states that the risk of bankruptcy of PT Garuda Indonesia Tbk. in the pandemic period it was higher than the pre-pandemic and post-

pandemic periods, which is not entirely true. Although the risk of bankruptcy increased during the pandemic, the risk was highest in the early post-pandemic period. Therefore, the hypothesis is rejected. Data shows that although the risk of bankruptcy surged during the pandemic, the peak occurred in the early post-pandemic period, indicating the need for stronger restructuring strategies and financial recovery efforts to reduce the risk of bankruptcy in the future.

Risk of bankruptcy of PT Garuda Indonesia Tbk. in the post-pandemic period it is lower than the pre-pandemic period.

To test this hypothesis, analysis was carried out by comparing the H-Score and average index values for the two periods. The data used covers the pre-pandemic period (2018-2019) and post-pandemic (2022-2023). By observing changes in the H-Score value, it can be determined whether this hypothesis is correct. As a basis for analysis, it can be seen in the following table:

Table 3. Comparison of Bankruptcy Analysis method of Fulmer PT. Garuda Indonesia Tbk Pre-pandemic period (2018-2019) and post-pandemic (2022-2023)

Periode	Year	H-Score Value	Average Index	Prediction
Pra-Pandemi	2018	-0,14	-0,53	Bankrupt
	2019	-0,92		
Post-Pandemi	2022	-4,65	-3,55	Bankrupt
	2023	-2,45		

Sumber: Data diolah peneliti, 2024

Based on table 3 above, researchers used H-Score value data in the pre-pandemic period (2018-2019) and post-pandemic (2022-2023). The H-Score value is used as an indicator of a company's bankruptcy risk, where a lower value indicates a higher risk.

In the pre-pandemic period, the H-Score value of PT Garuda Indonesia Tbk. was -0.14 in 2018 and -0.92 in 2019, with an average of -0.53. These values indicate that the company is in a condition that is vulnerable to bankruptcy, although not extreme. In this period, the company faced financial challenges, but the H-Score value was still at a relatively better limit compared to the post-pandemic period. The average value of -0.53 shows that even though there are risks, the company's financial condition is still quite stable.

On the other hand, in the post-pandemic, the H-Score value shows a significant decrease with a value of -4.65 in 2022 and -2.45 in 2023, resulting in an average of -3.55. 2022 recorded the worst H-Score value in the entire period analyzed, indicating a very high increase in bankruptcy risk. Even though there will be slight improvement in 2023, the H-Score value remains low indicating that the risk of bankruptcy is still very high. This drastic decline reflects the significant impact of the pandemic on the company's financial condition even though it has entered the post-pandemic period.

By comparing the average H-Score from both periods, it can be seen that the average H-Score in the post-pandemic (-3.55) is much lower compared to the pre-pandemic period (-0.53). This shows that the risk of bankruptcy of PT. Garuda Indonesia Tbk increased in the post-pandemic period. The significant decline in H-Score values reflects increasing financial pressures and the company's inability to fully recover from the impact of the pandemic. This situation indicates that the company is facing difficulties in managing debt and maintaining sufficient liquidity, which overall increases the risk of bankruptcy.

Based on the H-Score data analysis above, it can be concluded that hypothesis H3 states that the risk of bankruptcy of PT Garuda Indonesia Tbk. in the post-pandemic period is lower than the pre-pandemic period, rejected. On the contrary, the data shows that the risk of bankruptcy increases in the post-pandemic period. This conclusion shows that the impact of the pandemic on companies' financial conditions is very significant and increases their vulnerability to bankruptcy even though they have entered the post-pandemic period.

Significant differences in the bankruptcy risk of PT Garuda Indonesia Tbk. in the pre-pandemic, pandemic and post-pandemic periods

To test this hypothesis, analysis was carried out based on H-Score value data from 2018-2019 (pre-pandemic), 2020-2021 (pandemic), and 2022-2023 (post-pandemic). The summary of the data analysis can be seen in the following table:

Table 4. Comparative Data Analysis of Bankruptcy Prediction using the Fulmer method PT. Garuda Indonesia Tbk, Pre-pandemic, Pandemic and Post Periods Pandemic (Covid-19)

Periode	Tahun	Mark H-Score	Number of samples	Total H-Score	Rate-rate H-Score	Variance
Pra-Pandemi	2018	-0,14	2	-1,06	-0,53	0,30
	2019	-0,92				
Pandemi	2020	-0,88	2	-4,94	-2,47	5,05
	2021	-4,06				
Post-pandemi	2022	-4,65	2	-7,10	-3,55	2,42
	2023	-2,45				

Source: Data processed by researchers, 2024

Based on table 4 of the data analysis above, several comprehensive conclusions can be drawn to answer hypothesis H4 regarding the existence of significant differences in bankruptcy risk between the periods mentioned previously.

In the pre-pandemic period (2018-2019), PT Garuda Indonesia Tbk. recorded an average H-Score of -0.53, with a variance value of 0.30. This average value shows that the company at that time faced a relatively stable and controllable risk of bankruptcy. The low variance (0.30) also reflects the consistency in the company's financial performance during this period, despite continued financial challenges.

During the pandemic period (2020-2021), there was a significant increase in the average H-Score value to -2.47, with a high variance reaching 5.05. This increase reflects large fluctuations in the company's bankruptcy risk during the pandemic. A high variance indicates significant variation in a company's financial performance, caused by factors such as decreased revenue, increased costs, and global economic uncertainty that occurred during the COVID-19 pandemic.

Of the post-pandemic (2022-2023), although there has been a slight recovery with an average H-Score of -3.55 (especially for the H-Score value in 2023), the H-Score variance remains high with a value of 2.42. This shows that even though they have entered a post-pandemic economic recovery period, companies still face a significant level of bankruptcy risk and have not achieved the same financial stability as before the pandemic. A high variance indicates that the company is still facing challenges in maintaining financial stability and facing economic uncertainty which is considered to continue in the future.

Taking into account the high variance values during the pandemic and post-pandemic, as well as a significant jump in the average H-Score during the pandemic, it can be concluded that hypothesis H4 regarding the existence of a significant difference in the risk of bankruptcy of PT Garuda Indonesia Tbk. in the pre-pandemic, pandemic and post-pandemic periods is accepted. The high variance during the pandemic crisis shows that the impact on the company's financial condition is very significant, increasing its vulnerability to bankruptcy

risk even though it has entered the recovery phase. This has important implications for company management in designing strategies to manage financial risks in the future.

5. CONCLUSION

Based on the analysis and calculations carried out regarding the bankruptcy prediction of PT Garuda Indonesia Tbk for the 2018-2023 period using the Fulmer Model (H-Score) from a Pre-pandemic, Pandemic and Post-pandemic COVID-19 perspective, researchers can conclude the following:

- a. There is a risk of bankruptcy at PT Garuda Indonesia Tbk. based on the Fulmer analysis method (H-Score) for the 2018-2023 period. Data and analysis show strong indications that the company was in very poor financial condition during the period.
- b. Based on H-Score data analysis, the risk of PT Garuda Indonesia Tbk going bankrupt during the pandemic period increased, but the highest risk actually occurred at the beginning of the post-pandemic period. In addition, the risk of bankruptcy in the post-pandemic period is higher than in the pre-pandemic period. Taking into account the high variance values during the pandemic and post-pandemic, as well as a significant jump in the average H-Score during the pandemic, there are significant differences in the risk of bankruptcy of PT Garuda Indonesia Tbk in the pre-pandemic, pandemic and post-pandemic periods. High variance during the pandemic crisis shows a significant impact on the company's financial condition, increasing its vulnerability to bankruptcy risk even though it has entered the recovery phase. This has important implications for company management in designing strategies to manage financial risks in the future.

6. SUGGESTION

Based on the conclusions regarding the bankruptcy prediction of PT Garuda Indonesia Tbk for the 2018-2023 period using the Fulmer Model (H-Score) and the Pre-pandemic, Pandemic and Post-pandemic COVID-19 perspective, the following are suggestions for companies based on signaling theory:

- a. Considering the poor financial conditions during the 2018-2023 period, it is important for PT Garuda Indonesia Tbk to increase transparency in their financial reports. More detailed disclosure will send a positive signal to investors and stakeholders that the company is committed to openness and accountability.
- b. PT Garuda Indonesia Tbk should actively communicate the restructuring strategy and continued recovery efforts that are being undertaken to overcome the impact of the pandemic and poor financial conditions. This information will provide a positive signal to the market that the company has a clear plan to restore its financial health.
- c. In the face of the increasing risk of bankruptcy during and after the pandemic, PT Garuda Indonesia Tbk needs to announce risk reduction initiatives that have been or will be implemented such as diversifying revenue sources, more efficient cost management, or other steps taken to reduce financial risks.
- d. Conveying the success and progress that has been achieved in efforts to recover the company's finances and operations can provide a positive signal to investors so that they remain interested in investing in the company. For example, increases in the number of passengers, increases in revenue, or reductions in operational expenses need to be communicated transparently.
- e. Adopting and communicating good ESG (Environmental, Social, and Governance) practices can improve a company's image and send a positive signal to investors who care about the environment and sustainability which can be prominent in terms of *branding* company compared to its competitors. PT Garuda Indonesia Tbk can inform you about their efforts to reduce carbon footprints, increase social responsibility and improve corporate governance.

The suggestions for further research are as follows:

- a. For future researchers, it is recommended to focus on the mechanisms and impacts of state capital participation (PMN) or *bailout* from the Indonesian Government towards PT. Garuda Indonesia Tbk, as a state-owned company. This research is important considering the company's resilience over the years, even though its financial condition has shown a high potential for bankruptcy during that period.

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