FINANCIAL CONDITIONS ANALYSIS OF PT. ANGKASA PURA II (PERSERO) BASED ON FINANCIAL LEVERAGE ON PROFITABILITY USING ZMIJEWSKI METHOD

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ABSTRACT

A wrong decision that a company has taken, especially in funding, has a significant effect on its financial condition, namely capital, which affects its performance in achieving the expected targets. The company that attracts the author's attention because of its financial condition is PT. Angkasa Pura II (PERSERO) so that the authors decided to do a financial analysis at PT. Angkasa Pura II (PERSERO) from 2015 to 2019 by analyzing financial ratios, leverage ratios, financial leverage, and profitability ratios in the company using financial statement data from PT. Angkasa Pura II (PERSERO). This research aims to determine the profitability of PT. Angkasa Pura II (PERSERO), when measured with financial leverage. According to the data gathered from 2015 until 2019, the Return of Investments value decreased from 9.38% in 2015 to 2.61% in 2019. The Value of Return of Equity, respectively, decreased from 10.39% in 2015 to 4.12% in 2019. However, the value of degree financial leverage fluctuated over the years, With the average score of Degree of Financial Leverage 107,99%. Analysis at PT. Angkasa Pura II (PERSERO) shows unfavorable results because the value of financial leverage is dominantly greater than ROI and ROE. However, with the Zmijewski method, we can track the financial condition of PT. Angkasa Pura II (PERSERO). The result showed that PT. Angkasa Pura II (PERSERO) is still in good condition according to the Zmijewski method. PT. Angkasa Pura II (PERSERO) 's X-Score is still below zero, so the financial condition is still good. However, the chart showed a reduction in the value of X-Score on PT. Angkasa Pura II (PERSERO).

Keywords: Profitability, Financial leverage, PT. Angkasa Pura II, Bankruptcy, Zmijewski Method

OBJECTIVE

This study aims to measure and analyze the financial performance of PT. Angkasa Pura II (PERSERO) during 2015-2019 and to analyze whether there is a fluent in profitability caused by financial leverage and whether the company category is bankrupt or not.

INTRODUCTION

Companies engaged in services, manufacturing, and trading are looking for profits and maintaining the company's continuity to be maintained. Funding decisions include sources of funds from internal funds or external funds, the amount of debt and equity, and the type of debt and capital to be used. Companies need consideration for future decision-making. Analysis of financial statements on the company's financial performance in the past period can be used as material for this consideration. Companies with a smaller financial leverage level than the value of their assets are solvable companies.

Conversely, companies with most of their funding coming from debt will increase the risk of bankruptcy. A financial manager's biggest challenge is determining the right proportion between capital and debt in funding company operations. This is called the company's capital structure (a consideration or a comparison between long-term debt with its capital). These factors will be used as a reference for investors in making their investment. If many investors invest in the company, the share price will increase due to the high demand. In the end, the company will get additional capital gain from the increasing share price that led to its growth potential. Shareholders and creditors are often interested in seeing the amount of financial leverage of a company to determine its ability to return the company's capital.

For this reason, financial leverage analysis will be discussed more in this study. Financial leverage is often measured by simple financial ratios such as Debt to Assets Ratio (DR), Debt to Equity Ratio (DER), Time Interest Earned Ratio (TIER), and Degree of Financial Leverage (DFL). PT Angkasa Pura II (Persero) is a state-owned company engaged in airport services and airport-related services. The establishment of Angkasa Pura II aims to carry out management and business in airport services and airport-related services by optimizing potential resources owned and applying a good corporate governance practice. Angkasa Pura II progress has shown rapid improvement and increases in the airport service business by adding various infrastructure to improve service quality at the airports. Now, the company manages 16 Indonesian airports.

LITERATURE REVIEW

Financial Ratio
According to Irawati (2005: 22), financial ratios are a technique in financial management for measuring the financial condition of a company or the business results of a company in a certain period by comparing two kinds of variables. Financial Ratio Analysis can be divided into several types, which are: Profitability Ratio Analysis, Solvency Ratio Analysis, Liquidity Ratio Analysis, and Activity Ratio Analysis.

1. **Profitability Ratio**

Profitability Ratio is a ratio used to measure a company's ability to generate profit from revenue associated with sales, assets, and equity. Several profitability ratios are often used to measure the ability of these profit companies, including Gross Profit Margin, Net Profit Margin, Return on Assets (ROA), Return on Equity (ROE), Return on Sales (ROS), Return on Capital Employed (ROCE). These profitability ratios are used to show how well the company can make a profit from its operations.

A. **Return on Assets Ratio**

Return on Assets is the ratio that shows the percentage of profits that the company receives about total resources or total assets. Return on Assets or often abbreviated as ROA, measures how efficiently a company manages its assets to generate profits during a specific period. Return on Assets (ROA) can be defined as :

Net Profit After Tax / Total Assets (or average total assets)

B. **Return on Equity Ratio**

Return on Equity Ratio, which is usually abbreviated as ROE is a profitability ratio that measures the ability of the company to generate returns from shareholder investments. ROE is expressed in a percentage (%). ROE can be defined as :

ROE = Profit Before Tax and Interest / Sales

C. **Return on Sales Ratio**

Return on Sales is a ratio that shows how much profit is made by a company after paying variable costs of production such as wages for labor, raw materials, and others (but before taxes and interest). In other words, Return on Sales is a ratio that shows the level of profit that can be obtained from every dollar of sales. This ratio is also known as the Operating Margin or the Operating Income Margin. This ROS is also expressed as a percentage (%) and can be defined as:

ROS = Profit Before Tax and Interest / Sales

2. **Leverage Ratio**

A leverage ratio is a financial ratio that measures its ability to meet its long-term obligations, such as interest payments on debt, final principal payments on debt, and other fixed liabilities. Long-term debt is usually defined as a payment obligation with a maturity of more than one year. This Leverage Ratio compares the company's overall debt expense to its assets or equity. This ratio shows how much shareholders own the company's assets than assets owned by creditors (creditors). The leverage of the company will be less if the shareholder has more assets on it. However, if the creditor owns most of the assets, the company in question is said to have a high degree of leverage. This Solvency Ratio or Leverage Ratio helps management and investors understand the risk level in the company's capital structure.

A. **Debt to Equity Ratio**

The ratio debt to equity is a financial ratio that shows the relative proportion between equity and debt used to finance company assets. Debt to Equity Ratio (DER) is calculated by taking total debt liabilities and dividing them by equity. The Debt to Equity Ratio (DER) can be defined as the formula below.

(DER) = Total Debt / Equity

B. **Debt Ratio**

Debt Ratio is the ratio used to measure how much a company relies on debt to finance its assets. Debt Ratio or debt ratio can be calculated by dividing the total liabilities that the company has with the total assets. This Debt Ratio is often referred to as the Total Debt to Total Assets Ratio. The following is the debt ratio formula:

Debt Ratio = Total Liabilities / Total Assets

C. Times Interest Earned Ratio

Times Interest Earned is a ratio that measures the company's ability to pay or cover future interest expenses. The Times Interest Earned Ratio is also called the Interest Coverage Ratio. The way to calculate this is by dividing profit before tax and interest by Interest Expense that can be defined as:

Times Interest Earned Ratio = Profit before Tax and Interest / Interest Expense

Operational dan Financial Leverage Definition

Operating leverage arises when a company uses assets that have fixed operating costs. These fixed costs also contain depreciation costs for building and office equipment, insurance costs, and other costs arising from facilities and management fees. All of the costs are variable, which means they will constantly change based on production num. Therefore, in this analysis, it is assumed to be in the short run. Fixed operating costs are issued so that the sales volume can generate revenue that is greater than all fixed and variable operating costs. The effect of fixed operating costs is a change in sales volume resulting in changes in operating profits or losses more significant than a predetermined proportion.

Financial leverage uses funds with fixed expenses hoping that using these funds will increase earnings per share (EPS). Financial leverage problems only arise when companies use funds with fixed expenses. Companies that use funds with fixed expenses aim to produce favorable financial leverage or a positive effect if the funds' income is more significant than fixed expenses for using the funds concerned.

Degree of Operating Leverage (DOL)

Degree of operating leverage (DOL) is the percentage change in operating profit (EBIT) that is due to a one percent change in output (sales).

The level of operating elasticity in sales output units = Percentage change in operating profit (EBIT) / Percentage change in output (sales)

Degree of Financial Leverage (DFL)

DFL is the percentage change in earnings per share (EPS) due to a change in operating income (EBIT). In other words, DFL is the percentage change in EBIT that causes changes in EPS. Thus DFL is a quantitative measure of the sensitivity of a company's EPS due to its operating profit (EBIT).

(DFL) = Percent change in earnings per share Percent change in operating profit (EBIT)

Bankruptcy Analysis Prediction Models

Altman Model (Z-Score)

Mamduh M. Hanafi and Halim (2005: 286) Z-Score analysis is a bankruptcy prediction model developed in several countries. Altman (1983,1984) surveyed models developed in the United States, Japan, Germany, Switzerland, Brazil, Australia, England, Ireland, Canada, Netherlands, and France. One of the issues that appear is whether there is a standard financial ratio used to predict bankruptcy for all countries or is specific.

Springate Model

Gordon L.V. Springate introduced this model in 1978. This model is a developed Altman model. Multiple Discriminant Analysis is applied to this model. Initially, this model uses 19 popular financial ratios, but after testing, Springate only chose four ratios to determine the company's bankruptcy. This model has 92.5% accuracy by using 40 companies as the sample by Springate.

Ohlson's Model

Ohlson (1980), in his research, developed a logit (multiple logistic regression) models to build a probability prediction model of bankruptcy. Ohlson got inspired by previous studies and decided to modify the model for his study. Ohlson argues that this method can cover the shortcomings that exist in the MDA method used by Altman.

Zmijewski Model

Zmijewski's prediction model in 1983 was the result of 20 years of research. Zmijewski uses ratio analysis that measures the leverage, performance, and also liquidity of a company. If the company's score from this bankruptcy prediction model exceeds 0,

then the company is predicted to have the potential to go bankrupt. Conversely, if the company's score is less than 0, the company is not potentially going to bankruptcy.

METHODOLOGY

Figure 1 : model of study
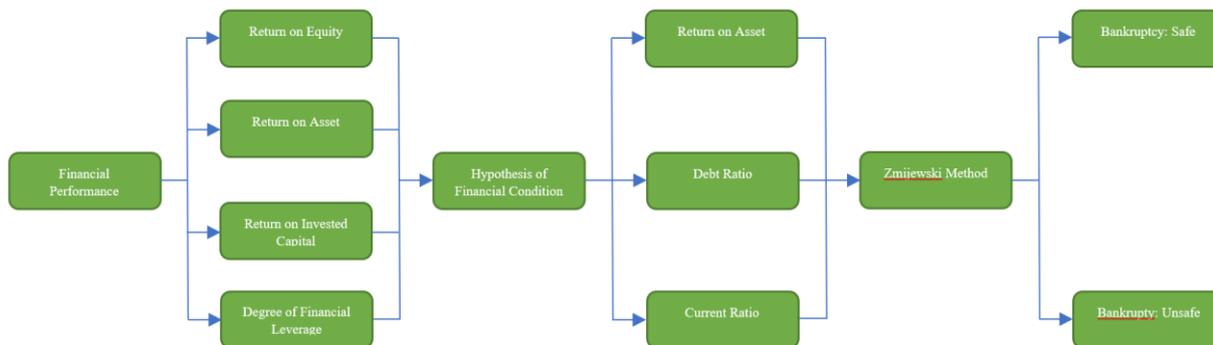
The model study that shown on figure 1 starts from a financial report that was acquired from PT. Angkasa Pura II. Then analyze the data that has been obtained according to needs, which are: return on capital (ROE), return on assets (ROA), return on invested capital (ROIC), and then measure the data to get the degree of financial leverage (DFL). From the results obtained, hypotheses about the financial situation can be extracted. Starting from the hypothesis, the author wants to test the hypothesis by measuring bankruptcy. The author uses the zmijewski method to measure bankruptcy, using return on assets, debt ratio, and liquidity ratio. The final result will be shown by figures that explain the level of bankruptcy of the company.

Comparing Financial Leverage to Profitability

Comparing the financial leverage to profitability is to know if the profitability of the company is going well or not. The profitability ratio which consists of return on assets, return on equity, and return on invested capital were used to measure, describe, and analyze the financial performance of the company along with degree of financial leverage.

Zmijewski

Zmijewski's X-Score model uses a random sampling technique in which Zmijewski requires one crucial thing: the proportion of the sample and the population must be determined in the advance frequency of financial distress. The random sampling method's choice as the sampling method is because previous researchers' match-fair sampling method tends to create biases in previous studies. Based on the description above, which has been presented in this introduction, the researchers are interested in analyzing financial conditions using the Zmijewski method (X-Score). Because the Zmijewski model (X-Score) uses financial ratio analysis that measures the performance, leverage, and liquidity of a company for its prediction model, the variables used in the Zmijewski model equation are ROA, debt Ratio (Leverage), Current Ratio (liquidity).

Zmijewski requires one crucial point. The proportions of the sample and the population must be determined to obtain the company's financial distress prediction frequency. This frequency is obtained by dividing the number of samples experiencing financial distress by the total sample size. The formula of Zmijewski can define as:

$$X = -4.3 - 4.5\ X1 + 5.7\ X2 - 0.004\ X3$$

Where,
X1 Return on Asset = Net income after tax / Total Asset
X2 Debt Ratio = Total Liabilities / Total Asset
X3 Current Ratio = Current Asset / Current Liabilities

X1 = Return on Asset
According to Bank Indonesia Letter of circular Number 6/23/DPNP 2004, the standard for score for the ROA is :

Table 3.1 ROA criteria score

Score	Information
ROA > 1,5%	Very Healthy
1,25% < ROA < 1,5%	Healthy
0,5% < ROA < 1,25%	Moderate
0% < ROA < 0,5%	Unhealthy
ROA <0,5%	Not Healthy

X2 = Debt Ratio

According to Bank Indonesia Letter of circular, the standard dari debt ratio is :

Table 3.2 debt ratio criteria score

Scoring	Information
DAR > 50%	Safe
DAR < 50%	Unsafe

X3 = Current Ratio

According to Bank Indonesia Letter of circular, the classification of Current Ratio is:

Table 3.3 current ratio criteria score

Level of CR	Information
CAR > 8%	Healthy
6,4 % < CAR < 7,9%	Unhealthy
CAR < 6,4%	Not Healthy

If the X-Score model calculation has been done with a series of financial ratios included in a discriminant equation will then produce a number or score in particular. This figure has a specific explanation or Cut off value.

Table 3.4 zmijewski cut off model

Score	Information
X > 0	This score means the company has a hard time financially, and high risk leads to bankruptcy.
X < 0	This score means the company is in financial condition, healthy, and not at risk of bankruptcy.

Hypothesis

H1 : Using Return on Earning, the profitability is decreased
H2 : Using Return on Invested Capital, the profitability is decreased
H3 : Using Return on Asset, the profitability is decreased
H4 : Using Degree of Financial Leverage, the used of capital stock is over
H5 : Using Debt Ratio, the company rely to their liabilities
H6 : Using Current Ratio, the financial condition is good

Limitation

This study focuses on financial performance on PT. Angkasa Pura II from 2015-2019, it neglects the current condition in 2020 during the Covid19 pandemic. Apart from that, his study also only focuses on the financial aspect and the financial condition. It is suggested to measure the financial performance of PT Angkasa Pura II during the Covid19 pandemic and also in other aspects, like the operational aspect.

ANALYSIS AND RESULT

Table 4.1 comparison of financial leverage and profitability

CRITERIA	YEAR					
	2015	2016	2017	2018	2019	AVERAGE
ROE	10.39%	9.74%	9.00%	8.17%	4.12%	8.28%
ROIC	9.38%	7.81%	6.92%	5.72%	2.61%	6.49%
ROA	8.32%	6.93%	6.16%	4.98%	2.29%	5.74%
DFL	102.75%	108.03%	110.91%	109.77%	108.51%	107.99%

Based on data from the data table 4.1 comparison of financial leverage and profitability of PT. Angkasa Pura II between financial leverage on company profitability shows that in 2017 the Degree of Financial Leverage has increased by 8.16% from 2015 wherein 2015 the value of DFL was 102.75%, and in 2017 DFL was 110.91%. Afterward, the DFL value decreased from 110.91% in 2017 to 108.51% in 2019. This shows that the value of DFL fluctuates.

However, the values of ROE, ROA, also ROIC are decreasing every year, where the value of ROE decreased from 10.39% in 2015 to 4.12% in 2019. The value of ROIC decreased from 9.38% in 2015 to 2.61% in 2019. Moreover, the value of ROA decreased from 8.32% in 2015 to 2.29% in 2019. Based on the data, it is found that one of the factors that cause the value of ROE, ROIC, and ROA to decrease is due to fluctuating net income, increased asset value, and the high number of liabilities. After analyzing the financial report, we analyzed the company's condition to find out the condition of the bankruptcy of PT. Angkasa Pura II. So we did the calculation using the Zmijewski method.

Table 4.2 zmijewski analysis

CRITERIA	YEAR					
	2015	2016	2017	2018	2019	AVERAGE
ROA	8.32%	6.93%	6.16%	4.98%	2.29%	5.74%
DAR	19.91%	28.81%	33.91%	39.05%	44.45%	33.22%
CAR	176.00%	233.00%	180.00%	120.00%	112.00%	164.20%
X	-5.78634623	-5.825071205	-4.991478781	-4.071447729	-3.602683922	-4.855405586

The results obtained after using the Zmijewski method show that the value of ROA decreases every year. However, it is still above 1.5%, which indicates that the company is still very healthy. In contrast to ROA, the debt ratio's value increases every year. In 2015, it was only 19.91% and increased to 44.45% in 2019. PT Angkasa Pura II has a very high value above 100% for the current ratio, which causes this value to be relatively high for a company. X-Score value from PT. Angkasa Pura II was at -5.786346293 in 2015 and is at the highest point at -3.602683922 in 2015. This number shows that PT. Angkasa Pura II is still in a safe condition from bankruptcy.

CONCLUSION

This research learned about financial conditions in PT. Angkasa Pura II based on financial performance from 2015 until 2019. The result shows the profitability of PT. Angkasa Pura has been decreasing year by year since 2015 until 2019. The reason why the profitability decreased is because the net income also decreased. However, the number of liabilities and assets is increasing. With the Zmijewski method to know the bankruptcy of PT. Angkasa Pura II, the result shows that PT. Angkasa Pura II is still in safe condition even though the profitability is decreasing, the number of current ratios is still high and the debt ratio is still low.

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