

# Analysis of Solvency Ratios and Profitability Ratios to Measure The Financial Performance of Aviation Sector Companies for The Period 2018 -2022

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## Abstract

*This research aims to evaluate the solvency and profitability ratios of PT Garuda Indonesia Tbk and PT AirAsia Indonesia Tbk from 2018 to 2022, and their financial performance based on these ratios. The research method uses Solvency ratios, such as Debt to Assets Ratio (DAR) and Debt To Equity Ratio (DER), to measure a company's ability to manage debt against its assets and equity PT Garuda Indonesia Tbk and PT AirAsia Indonesia Tbk. The research results show that the financial performance of PT Garuda Indonesia Tbk and PT AirAsia Indonesia Tbk from 2018 to 2022 shows low solvency and profitability, based on industry standards. This evaluation provides important information for company management to improve debt management strategies, increase operational efficiency, and increase asset use to improve the company's long-term profitability.*

**Keywords:** *Solvency Ratio, Profitability Ratio and Financial Performance*

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## Introduction

This study analyzes the financial performance of aviation sector companies during the period 2018 - 2022. The financial ratios used are solvency ratios (Debt to Asset Ratio and Debt to Equity Ratio) and profitability ratios (Return On Asset and Return On Equity). The companies studied are air transportation companies listed on the IDX. The company is PT Garuda Indonesia Tbk and PT AirAsia Indonesia Tbk. Researchers want to know the financial performance of air transportation companies listed on the IDX during the period 2018 - 2022.

**Table 1 Total Assets, Total Debt, Total Equity and net income Garuda Indonesia Tbk**

Years	Total Assets	Total Debt	Total Equity	Net Income
2018	60,137,117,264,833.60	54,052,863,719,247.50	9,259,139,739,507.96	(3,312,438,842,257.60)
2019	61,970,455,827,538.20	53,867,837,343,532.70	10,022,571,502,086.20	89,815,824,895.69
2020	152,185,901,368,124.00	179,591,038,843,441.00	(27,405,137,475,317.30)	(34,931,358,942,172.10)
2021	102,606,923,823,110.00	189,768,973,965,763.00	(87,162,050,142,653.40)	(59,543,577,289,586.30)
2022	98,189,149,275,590.50	122,363,939,039,370.00	(24,174,789,763,779.50)	58,845,201,637,795.30

Source: Annual Financial Report of PT Garuda Indonesia Tbk for the Period 2018-2022

**Table 2 Total Assets, Total Debt, Total Equity and net income AirAsia Indonesia Tbk**

Years	Total Assets	Total Debt	Total Equity	Net Income
2018	2,845,045,212,353.00	3,647,220,571,707.00	(802,175,359,354.00)	(907,024,833,708.00)
2019	2,613,070,074,932.00	2,410,942,815,607.00	202,127,259,325.00	(157,368,618,806.00)
2020	6,080,516,085,752.00	8,990,927,886,117.00	(2,910,411,800,365.00)	(2,754,589,873,561.00)
2021	5,136,948,816,783.00	10,330,589,763,360.00	(5,193,640,946,577.00)	(2,345,394,201,170.00)
2022	5,356,962,889,162.00	12,172,269,741,814.00	(6,815,306,852,652.00)	(1,646,936,950,638.00)

Source: Annual Financial Report of AirAsia Indonesia Tbk for the Period 2018-2022

It can be concluded from Tables 1 and 2 above that Garuda Indonesia Tbk experienced an increase in losses from 2018 to 2021 but a very strong net profit in 2022. In addition, AirAsia Indonesia Tbk experienced varying losses from 2018 to 2022. During this time, Garuda Indonesia

Tbk and AirAsia Indonesia Tbk experienced a decrease in net profit as the Covid-19 pandemic impacted a number of industries, including the aviation sector. The last two years, from 2020 to 2022, there has been a steady decline in the company's financial results. Regarding the ratio comparison used in this study, there has been previous research. Previous research on the use of profitability and solvency ratio analysis to assess financial performance at PT Mayora Indah Tbk conducted by Syamsul Bakhtiar Ass (2021) showed that the company's financial performance was below standard. Computational findings showing that profitability and solvency analysis are below standard indicate this. This is due to the decline in the company's ability to maximize its resources. from resources derived from capital, assets, and investments that do not generate profits or profits when used. This encourages the author to investigate the financial performance of PT Garuda Indonesia Tbk and PT AirAsia Indonesia Tbk using other data. The company's ability to pay off all its debts with its current assets is measured by its solvency ratio, while the profitability ratio is used to assess the potential of a business to generate profits within a certain period of time.

## Literature Review

In this study, solvency ratio assessment is based on Debt to Assets Ratio and Debt To Equity Ratio and for profitability ratio assessment is based on Return On Assets and Return On Equity. According to Cashmere (2018: 112), the solvency ratio is a ratio used to measure the extent to which the company's assets are financed with debt. This means how much debt burden the company bears compared to its assets. In a broad sense, it is said that the solvency ratio is used to measure the company's ability to pay all its obligations, both short and long term if the company is dissolved (liquidated).

The measurement of the solvency ratio used in this study, namely:

$$\text{Debt to Assets Ratio} = \frac{\text{Total Debt}}{\text{Total Assets}} \times 100\%$$

According to Kasmir (2018: 112) DAR is a ratio used to see how much the company's assets are funded by debt or how much the company's debt is affected by asset management.

$$\text{Debt To Equity Ratio} = \frac{\text{Total debt}}{\text{Total Equity}} \times 100\%$$

According to Kasmir (2018:157) DER is a ratio used to assess debt to equity. This ratio is sought by comparing all debt, including current debt with all equity..

Menurut Kasmir (2019:196) "Profitability ratio is a ratio to assess the company's ability to seek profit. This ratio also provides a measure of the effectiveness of a company's management. This is indicated by the profit generated from sales and investment income. The point is that the use of

this ratio shows the company's effectiveness”.

The measurement of the profitability ratio used in this study, namely:

$$\text{Return On Assets} = \frac{\text{Net Income}}{\text{Total Assets}} \times 100\%$$

According to Kasmir (2018:201) *return on asset used to show the company's ability to generate profits by using its total assets.*

$$\text{Return On Equity} = \frac{\text{Net Income}}{\text{Total Equity}} \times 100\%$$

According to Kasmir (2018:204), “*Return On Equity* is the return on equity or profitability of own capital is a ratio to measure net profit after tax with own capital.” Return On Equity is also a ratio used to show what percentage of net income is obtained when measured from the owner's capital. The greater this ratio, the better.

According to Kasmir (2016:5) “Financial performance is a reflection of the company's financial condition in a certain period, whether the company has reached the target that has been set or not. The financial performance is related to the progress of the company, because the financial sector can be used as a measure of the company's success rate”.

The benchmarks used in assessing the company's financial performance are as follows:

**Table 3 Industry Standard Ratio According to Kasmir**

<b>Ratio</b>	<b>Industry Standard</b>
<b>Liquidity Ratio</b>	
Current Ratio (CR)	200%
Quick Ratio (QR)	150%
Cash Ratio (CR)	50%
<b>Profitability Ratio</b>	
Net Profit Margin (NPM)	20%
Return on Assets (ROA)	30%
Return on Equity (ROE)	40%
<b>Solvency Ratio</b>	
Debt to Assets Ratio (DAR)	35%
Debt to Equity Ratio (DER)	90%
Long Term Debt to Equity Ratio (LTDER)	10 times

Ratio	Industry Standard
Times Interest Earned	10 times
Fixed Charge Coverage	10 times

Source: kasmir (2018; 187-208)

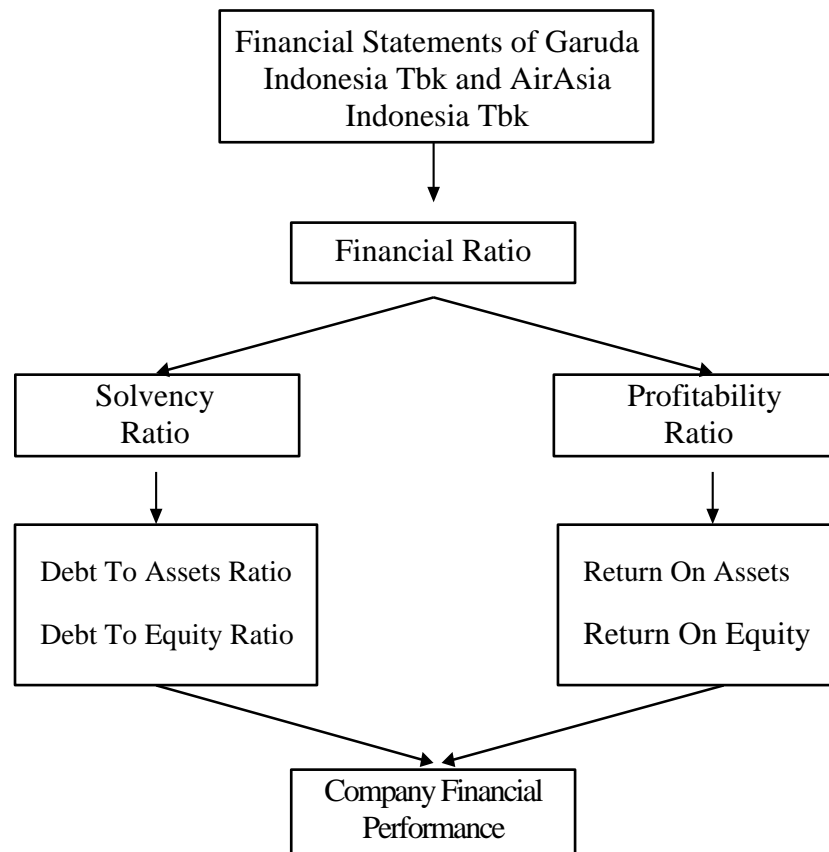


Figure 1 Research Framework

According to Ass (2020). The results of Analysis of solvency and profitability ratios to measure financial performance at PT. Mayora Indah Tbk showed that financial performance in terms of profitability and solvency analysis was not good. This can be seen from the results of calculations which show that the analysis of profitability and solvency is below standard. This is because the company is less able to optimize the resources owned by the company. Both from resources in the form of capital, assets and investments that do not generate profit or profit in terms of utilization.

According to Sutandi (2022). on the analysis of the solvency ratio calculated using the debt to asset ratio, the financial performance of Perum BULOG Regional Office of Sumsel and Babel in 2018-2020 is not good, the company has a total debt that is greater than the total assets. This means that the company has not been able to cover its debts with its assets. Meanwhile, the solvency ratio calculated using the debt to equity ratio, the financial performance of Perum BULOG Regional Office of Sumsel and Babel in 2018-2020 is not good

According to Irmayani (2020), this study aims to examine the Impact of the COVID-19 Pandemic as a national emergency disaster on the returns on shares of the Consumer Good Industry sub-sector on the Indonesia Stock Exchange as seen from the difference in average abnormal returns on shares before and after the COVID-19 Pandemic was declared a national emergency disaster on March 2, 2020. The population in this study were companies in the Consumer Good Industry sub-sector on the Indonesia Stock Exchange with a total of 44 companies in the Consumer Good Industry sub-sector. Using the census sampling method covering the entire population. The study focused on the window period, namely 10 days before and 10 days after the event date. Data were analyzed using the paired sample t-test. From the research conducted, it is known that there is no difference before and after the COVID-19 Pandemic was declared a national emergency disaster on the stock returns of companies in the Consumer Good Industry sub-sector on the Indonesia Stock Exchange. This can be seen from the decrease in the average abnormal return in the window period after the COVID-19 Pandemic was declared a national emergency disaster. The average abnormal return value for the window period before the event is 0.00949 and the window period after the event is -0.00252.

## Research Methods

This type of research is quantitative research with a descriptive approach. Where quantitative is research data in the form of numbers and analysis using statistics. According to Indrawan & Yaniawati (2016: 141) "Quantitative research is an attempt by researchers to collect numerical data, the numerical data is then processed using statistical work formulas and derived from variables that have been operationalized, with certain measuring scales such as nominal, ordinal, interval, and ratio scales".

The object studies are two companies that are PT Garuda Indonesia Tbk, and PT Air Asia Indonesia Tbk. The data are time series which is from 2018 to 2022 and cross-section two companies.

According to Sugiyono (2017) the comparative method is research that intends to compare the value of one or more independent variables in two or more populations, samples or different times or a combination of all. Comparative research has a higher level of difficulty than descriptive

**Table 4 Operational Variables**

Variables	Definition	Indicators	Scales
Solvability	The solvency ratio is a	a. Debt to	Ratio

Variables	Definition	Indocators	Scales
Profitability	ratio to assess a company's ability to pay off all of its obligations, both short and long term, with guaranteed assets or assets owned by the company until the company closes or goes into liquidation.	a. Assets Ratio	Ratio
		b. Debt to Equity Ratio	
Profitability	Profitability is the company's ability to generate profits within a certain period of time.	a. Return On Assets	Ratio
		b. Return On Equity	

## Result and Discussions

**Table 5 Assessment of Financial Performance Solvency Ratio With Kasmir Comparison PT Garuda Indonesia Tbk Period 2018-2022**

Year	Solvency		Kasmir			
	Debt to asset ratio	Debt to Equity ratio	Standar Debt to asset ratio	Debt to Equity ratio	Debt to asset ratio	Condition Debt to Equity ratio
2018	89,98%	583,77%	35%	90%	Not Good	Not Good
2019	86,82%	537,47%	35%	90%	Not Good	Not Good
2020	118%	(655,3)%	35%	90%	Not Good	Not Good
2021	184,84%	(217,7)%	35%	90%	Not Good	Not Good
2022	124,62%	(506,2)%	35%	90%	Not Good	Not Good
<b>Average</b>	<b>120,85%</b>	<b>(459,7)%</b>	<b>35%</b>	<b>90%</b>	<b>Not Good</b>	<b>Not Good</b>

Source: Data Processed. 2024

Garuda Indonesia Tbk's solvency ratio for the 2018-2022 period for the Debt to Assets Ratio

(DAR) and Debt to Equity Ratio (DER) is in poor condition because it is much higher than the industry norm, based on the findings of the above calculations. The industry norm for Kasmir’s debt to assets ratio (DAR) in 2018 is 35%, while the debt to equity ratio (DER) is 90%. The calculation findings of the debt-to-asset ratio amounted to 128.19%, while the calculation results of the debt-to-equity ratio amounted to -459.7%. These figures are far below the industry standard.

**Table 6 Assessment of Financial Performance Solvency Ratio With Kasmir Comparison PT AirAsia Indonesia Tbk Period 2018-2022**

<i>Year</i>	<i>Solvency</i>		<i>Kasmir</i>			
	<i>Debt to asset ratio</i>	<i>Debt to Equity ratio</i>	<i>Standar</i>		<i>Condition</i>	
			<i>Debt to asset ratio</i>	<i>Debt to Equity ratio</i>	<i>Debt to asset ratio</i>	<i>Debt to Equity ratio</i>
2018	128,19%	(454,66)%	35%	90%	Not Good	Not Good
2019	92,26%	119,27%	35%	90%	Not Good	Not Good
2020	147,86%	(308,92)%	35%	90%	Not Good	Not Good
2021	201,1%	(198,9)%	35%	90%	Not Good	Not Good
2022	227,22%	(178,6)%	35%	90%	Not Good	Not Good
<i>Average</i>	<i>159,32%</i>	<i>(200,33)%</i>	<i>35%</i>	<i>90%</i>	<i>Not Good</i>	<i>Not Good</i>

Source: Data Processed. 2024

The solvency ratios Debt to Equity Ratio (DER) and Debt to Assets Ratio (DAR) of PT AirAsia Indonesia Tbk for the 2018-2022 period are in poor condition because they are below the industry norm, based on the findings of the above calculations. The industry norm for Kasmir's debt-to-asset ratio (DAR) in 2018 is 35%, while the debt-to-equity ratio (DER) is 90%. The debt-to-equity ratio was recorded at -200.33%, while the debt-to-assets ratio was 159.32%. This deviates greatly from the industry norm.

**Table 7 Assessment of Financial Performance Profitability Ratio With Kasmir Comparison PT Garuda Indonesia Tbk Period 2018-2022**

<i>Year</i>	<i>Profitability</i>		<i>Kasmir</i>			
	<i>Return On Assets</i>	<i>Return On Equity</i>	<i>Standar</i>		<i>Condition</i>	
			<i>Return On Assets</i>	<i>Return On Equity</i>	<i>Return On Assets</i>	<i>Return On Equity</i>
2018	(5,51)%	(35,77)%	30%	40%	Not Good	Not Good



2019	0,14%	0,89%	30%	40%	Not Good	Not Good
2020	(22,95)%	127,46	30%	40%	Not Good	Good
2021	(58,03)%	68,31%	30%	40%	Not Good	Good
2022	59,93%	(243,4)%	30%	40%	Good	Not Good
<b>Average</b>	<b>(28,83)%</b>	<b>(30,05)%</b>	<b>30%</b>	<b>40%</b>	<b>Not Good</b>	<b>Not Good</b>

Souce: Data Processed. 2024

The profitability ratios Return On Equity (ROE) and Return On Assets (ROA) of PT Garuda Indonesia Tbk for the period 2018-2022 are in poor condition because they are much higher than the industry norm, based on the findings of the above calculations. The industry norm for Kasmir in 2018 is 30% for Return on Equity (ROE) and 40% for Return on Assets (ROA). The calculated values for Return on Equity and Return on Assets are -30.05% and -28.83% respectively, below the industry standard.

**Table 8 Assessment of Financial Performance Profitability Ratio with Kasmir Comparison PT AirAsia Indonesia Tbk Period 2018-2022**

<i>Year</i>	<i>Profitability</i>		<i>Kasmir</i>			
	<i>Return On Assets</i>	<i>Return On Equity</i>	<i>Standar Return On Assets</i>	<i>Standar Return On Equity</i>	<i>Condition Return On Assets</i>	<i>Condition Return On Equity</i>
2018	(31,88)%	113,07%	30%	40%	Not Good	Good
2019	(6,02)%	(77,85)%	30%	40%	Not Good	Not Good
2020	(45,3)%	94,64%	30%	40%	Not Good	Good
2021	(45,65)%	45,15%	30%	40%	Not Good	Good
2022	(30,74)%	24,16%	30%	40%	Not Good	Not Good
<b>Average</b>	<b>(31,92)%</b>	<b>39,83%</b>	<b>30%</b>	<b>40%</b>	<b>Not Good</b>	<b>Good</b>

Souce: Data Processed. 2024

PT AirAsia Indonesia Tbk's profitability ratio for the 2018-2022 period can be said to be in poor condition for Return On Assets (ROA), far above industry standards, and in good condition for Return On Equity (ROE). almost touching the industry standard value, based on the calculation results above. The industry norm for Kasmir in 2018 is 30% for Return on Equity (ROE) and 40% for Return on Assets (ROA). The calculation results show that Return On Equity is 39.83% and Return On Assets is -31.92%, with the Return On Equity value being below the industry norm

while the Return On Assets figure is below it.

There are some discussion results from previous research, which are:

The results of Analysis of solvency and profitability ratios to measure financial performance at PT. Mayora Indah Tbk showed that financial performance in terms of profitability and solvency analysis was not good. This can be seen from the results of calculations which show that the analysis of profitability and solvency is below standard. This is because the company is less able to optimize the resources owned by the company. Both from resources in the form of capital, assets and investments that do not generate profit or profit in terms of utilization. Based on the research results, the financial performance in terms of profitability and solvency analysis is not good. This can be seen from the results of calculations which show that the analysis of profitability and solvency is below standard. From the results obtained, this is because the company is less able to optimize the resources owned by the company. Both from resources in the form of capital, assets and investments that do not generate profit or profit in terms of utilization.

Based on the analysis of the solvency ratio calculated using the debt to asset ratio, the financial performance of Perum BULOG Regional Office of Sumsel and Babel in 2018-2020 is not good, the company has a total debt that is greater than the total assets. This means that the company has not been able to cover its debts with its assets. Meanwhile, the solvency ratio calculated using the debt to equity ratio, the financial performance of Perum BULOG Regional Office of Sumsel and Babel in 2018-2020 is not good, meaning that the company is unable to utilize equity in financing the company's debt. 2. Based on the analysis of profitability ratios calculated using the return on asset ratio and return on equity ratio, the financial performance at Perum BULOG Regional Office of Sumsel and Babel from 2018-2020 is not good. This is because the company has not been able to optimize the use of assets in profit-making activities and increase its sales so that the profit earned by the company increases and is maximized.

The results of the results of the financial performance of Perum BULOG, the Regional Office of South Sumatra and Babylon in 2018- 2020 indicated that, the solvency ratio analysis calculated using the debt to asset ratio had a financial performance in poor condition; the company had a total debt that was greater than the total assets. It meant that the company had not been able to cover its debts with its assets. If calculated using the debt to equity ratio, the financial performance was in poor condition, meaning that the company was not able to utilize equity in financing the company's debt. The results of the analysis with the profitability ratios calculated using the return on asset ratio and the net profit margin ratio at Perum BULOG, the South Sumatra and Babel Regional Offices, were in poor condition, because the profits generated by the company each year decrease and the company had not been able to increase profits, this

showed financial performance the company was not good.

## Conclusions

The average debt to asset ratio of PT Garuda Indonesia Tbk calculated using solvency ratios and industry norms is 120.85%. This figure is far below the industry average of 35%, according to Kasmir's business analysis. Furthermore, the industry average of 90% is far above the average Debt To Equity Ratio of -459.7%. Based on the solvency ratio, the performance of PT Garuda Indonesia Tbk is still not effective as seen from the results which are far below the industry average.

PT AirAsia Indonesia Tbk's average debt-to-asset ratio is 159.32%. This figure is far below the industry average of 35%, according to Kasmir's business analysis. Furthermore, the industry average of 90% is far above the average Debt To Equity Ratio of -200.33%. Based on the solvency ratio, the performance of PT AirAsia Indonesia Tbk is still not effective because the company's performance is far below the industry average.

If profitability ratios are used and compared to industry norms, PT Garuda Indonesia Tbk's average Return On Assets is -28.83%. Based on Cashmere's analysis of the industry average, this figure is well below the 30% norm. In addition, the industry average of 40% is well above the average Debt To Equity Ratio of -30.05%. Based on the profitability ratio, the performance of PT Garuda Indonesia Tbk is still not effective because the results obtained by the company are far below the industry average.

The average return on assets of PT AirAsia Indonesia Tbk is -31.92%. Based on Cashmere's analysis of the industry average, this figure is well below the 30% norm. In addition, the industry average of 40% is not far from the average Debt to Equity Ratio of 39.83%. Based on the profitability ratio, it can be concluded that PT Garuda Indonesia Tbk's performance on Return On Assets is still less effective because the company's performance is far below the industry average. However, since the results are close to the industry average, then this is quite effective in terms of Return On Equity.

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