Financial Performance Analysis of PT. Garuda Indonesia, Tbk. in Comparison with Other Regional Airlines

Amanda Maharani Subiakto[1] and Subiakto Sukarno[2]

[1&2] Institut Teknologi Bandung

Abstract**:** *The Asian Pacific region aviation industry has been gaining attention due to its rapid growth in the industry. This region is currently being the major contributor of the world's air-traffic growth twenty years from now. Indonesia is one of the countries that is known for its contribution to the growth itself. Garuda Indonesia is the flag carrier of Indonesia which operates as a full service airline with destinations over 51 destinations around the world. This study analyzes the financial performance of the Indonesian aviation industry, with specific reference to the PT. Garuda Indonesia, Tbk. The researcher compares the performance of the airline with other Asian Pacific airlines to get a clearer comparison and overview of the Asian Pacific aviation industry. The financial performance of each airline has been explored to support this study through analyzing the financial statements throughout 2010-2014. The data collected from the company's prospectus, annual reports, and other sources to help the researcher to analyze the financial performance of all airlines. The financial ratios which are used in this research are liquidity ratio, profitability ratio, and solvency ratio to determine the financial performance each year. Continue using DuPont Analysis, Compound Annual Growth Method (CAGR), and Optimal Capital Structure. It was found that Garuda Indonesia currently suffering from high loss. A significant change is noticed in 2014 where net income fell up to 90%. This event is occurred due to the rising domestic jet fuel price and depreciation of Indonesian local currency. The result of this analysis will be given to PT. Garuda Indonesia, Tbk. to improve the financial performance of the company and can be used as a reference for other airline to study financial performance of other airlines.*

Keywords: *Financial performance, Garuda Indonesia, Financial Ratio, DuPont Analysis, Optimal Capital Structure*

1. Introduction

1.1 Background

The aviation industry is one of global industries which plays a major role in this world and continues to grow rapidly. This industry becomes a large and developing industry which facilitates the growth of economy, international investment, world trade, as well as tourism. As time passes, aviation industry not only used for the government, but also used as a type of business which known as commercial aviation. Commercial aviation is a part of aviation industry which specialized in operating aircraft for passengers and cargo.

In Indonesia, there is one flag carrier that has a worldwide reputation which is Garuda Indonesia. It is the pioneer of airline company Indonesia which was previously ruled by the government of Indonesia but now it has become a private entity. Commonly recognized as Garuda Indonesia, PT. Garuda Indonesia, Tbk. is the official flag carrier of Indonesia and serves as a full service airline. It is the largest airline in Southeast Asia which carries over 160,000 passengers. Since 2012, Garuda Indonesia has won several awards for its remarkable service and became one of the members of SkyTeam.

1.2 Statement of Problem

Besides achievements which Garuda Indonesia has earned, apparently the company is experiencing financial problems. From January to June 2014, PT Garuda Indonesia suffered a loss of US $211 Million. The revenue increases up to 0.7%, but the costs exceed the revenue with an increase up to 15% in 2014. Within 6 months, the loss increased to $373.4 Million. Garuda Indonesia shares were significantly declining especially during 2013 until 2014 while JCI was increasing.

1.3 Problem Identification

A. How is the financial performance of PT. Garuda Indonesia, Tbk.?
B. What are the problems that occured in the financial performance of PT. Garuda Indonesia, Tbk.?
C. What is the solution to improve the financial performance of PT. Garuda Indonesia, Tbk.?

1.4 Research Objectives

To analyze the financial performance of PT. Garuda Indonesia, Tbk. compared to other asian regional airlines such as Thai Airways, Korean Airlines, Singapore Airlines, and Cathay Pacific, with financial ratio analysis, and optimal capital structure.

1.5 Scope and Limitations

This study was based on published financial data for PT. Garuda Indonesia, Tbk and four other Asian regional airlines which are Thai Airways, Korean Airline, Cathay-Pacific, and Singapore Airline. The data gathered from the company's annual reports and financial ratios for the period 2010 - 2014. The researcher will only determine the financial ratios, and optimal capital structure to analyze the possible cause which impacts the deterioration on financial performance of the firm.

2. Literature Review

2.1 Financial Ratio Analysis

Ratio analysis is a way to determine several aspects of the company's operating and financial performance such as liquidity, profitability, solvency, and efficiency. The ratio analysis of the company will be compared to the ratio analysis on previous period, other companies or industries, and the economy.

A. Time Series Analysis

Time series analysis is commonly used to summarize the historical financial ratios which have been calculated during the period of 2010 to 2014. This analysis assesses the financial ratios within the selected periods and compares it with other companies which have been set as the comparable companies.

B. Compound Annual Growth Rate (CAGR)

This tool is a method of calculation which serves a constant rate of return of a certain firm in the interval years, assuming each element grows at a constant rate that compounded over a period of time. The formula is expressed below.

$$\text{CAGR} = \left(\frac{\text{Ending Value}}{\text{Beginning Value}}\right)^{\frac{1}{\text{(Ending Year-Beginning Year)}}} - 1 \quad (1)$$

C. DuPont Analysis

DuPont Analysis is a method to measure the firm's performance and financial condition. It uses both income statement and balance sheet and combines it into two summary measures of profitability, return on total asset (ROA), and return on common equity (ROE). ROE is affected by three components; operating efficiency(measured by net profit margin), asset utilization (measured by total asset turnover), and financial leverage (measured by equity multiplier).

$$ROE = \frac{Net\ Income}{Sales} \times \frac{Sales}{Total\ Assets} \times \frac{Total\ Assets}{Equity} \quad (2)$$

2. 2 Optimal Capital Structure

Damodaran (2001) stated that capital structure is equity refers to the type of financing which brings the share of the control of the company's management. Capital structure is considered to be effective if it results in a low cost capital and high net present value (NPV).

A. Cost of Equity

The cost of equity refers to the required rate of return of shareholder on equity investment. Based on Damodaran (2006), the cost of equity is the expected rate by the investor or investment. Referring to Capital Asset Pricing Method (CAPM), the cost of equity is depending on risk-free rate (Rf), levered beta (βlevered), and market risk premium (Rm – Rf). The formula of CAPM is expressed below

$$R_E = R_f + \beta_{levered}[E(R_m) - R_f] \quad (3)$$

The asset systematic risk is expressed by beta coefficient. It has to be predicted to the market portfolic Levered beta can be measured by using the following equation.

$$\beta_{levered} = \beta_{unlevered}[1 + (1 - T)\left(\frac{D}{E}\right)] \quad (4)$$

B. Cost of Debt

The definition of cost of debt is the interest rate of a firm to pay all of its debt, including tax and bonds. Long-term bonds outstanding rate is common when it comes to cost of debt. To determine the cost of debt, the author will be using the interest coverage ratio. After determining the bond rating, the bond rating has to be adjusted to Indonesian Market Interest rate. The Indonesian Market Interest Rate is expressed on the table below. The after-tax cost of debt formula is expressed below.

TABLE I: Indonesia Adjusted Market Interest Rate

Interest Coverage Ratio	Rating	Indonesia Market Interest Rate (%)
> 12.5	AAA	6.40
9.50 - 12.50	AAA	6.90
7.50 -9.50	A+	7.05
6.00 - 7.50	A	7.15
4.50 - 6.00	A-	7.40
4.00 - 4.50	BBB	8.25
3.50 - 4.00	BB+	9.50
3.00 - 3.50	BB	10.50
2.50 - 3.00	B+	11.25
2.00 - 2.50	B	11.75
1.50 - 2.00	B-	12.50
1.25 - 1.50	CCC	13.25
0.80 - 1.25	CC	14.50
0.50 - 0.80	C	15.25
<0.50	D	16.25

(Source: Agustina, 2012)

If the operating income is negative, then the after-tax cost of debt will be same with pre-tax cost of debt. If the operating income is lower than the interest expense, the tax rate should be adjusted.

C. Weighted Average Cost of Capital (WACC) and Firm Value

The weighted average cost of capital (WACC) is the average interest rate a firm has to pay to finance its assets by measuring the average weight cost of equity (Re) and cost of debt (Rd). The formula of WACC according to Ross, Westerfield, and Jordan (2008), is expressed below.

$$WACC = R_E\left(\frac{E}{V}\right) + R_D(\frac{D}{V})(1 - T) \quad (5)$$

The firm's value can be measured by a valuation model based on Gitman (2006). The formula as follows:

$$Firm's\ Value = EBIT[1-T]/WACC \quad (6)$$

3. Methodology

In order to proceed with this analysis, there are six steps need to be taken. The following steps are based on formal research guideline. The steps are problem identification, literature review, data gathering, data processing, data analysis, and conclusion and recommendation. First of all, the researcher finds the problem to be identified. Then, research objectives will be made to solve the problems. Without any theoretical foundations, this research would not be valid. Thus, in Literature Review, researcher used several books, journals, and other academic references as foundation to conduct this research. After the references have been collected, the data to support the research will be gathered from multiple resources. Then, it will be processed in data processing before entering the data analysis section. In data analysis, the researcher analyzes the outcome from data processing, from financial ratio analysis to optimal capital structure. Lastly, conclusion and recommendation will be made for the company and can be used as a reference for further research.

4. Data Analysis

4.1 Financial Ratio Analysis

4.1.1 Time Series Analysis

Liquidity

The liquidity ratio of PT. Garuda Indonesia, Tbk. appears to be decreasing every year, although in 2011, both current ratio and quick ratio was above 1. The cash from operating and financing activities decreased to 9.6%. In addition, there was a shortage on spare part and catering services. The current liabilities of the firm increased mainly due to an increase on bank loan by 66.6% for company's expansion. This also happened in other selected regional airlines, except Singapore Airlines which shows a slight increase in its liquidity ratio.

Profitability

PT. Garuda Indonesia, Tbk. reached its peak in 2012. Almost all the profitability ratios are increased significantly from 2010, except Gross Profit Margin which showed a decrease to 0.20. However, the profitability of PT. Garuda Indonesia, Tbk. kept decreasing significantly from 2013, especially on ROA and ROE. This is caused by the loss of net income in 2013 and 2014. Thai Airways also suffered from the decreasing profitability ratios, since the net income in 2014 reached below zero. Based on the data above, there are two companies which have similar condition on profitability measures. Cathay Pacific and Korean Air reached its peak in 2011 but decreased in 2012. In 2013 and 2014, both the companies made a significant comeback.

Solvency

In solvency ratios, there are three elements to describe the leverage condition of the company's performance, those are Debt-to-Equity Ratio, Debt-to-Asset, and Interest Coverage Ratio. In this ratio, PT. Garuda Indonesia, Tbk. shows a decreasing performance. This is due to the increasing liabilities and low EBIT. The debt-to-asset ratio of the firm is increased in 2014, but the number is still below 1 so there is a possibility to pay its debt. It can be seen there are two companies which had high debt-to-equity ratio which are Korean Air and Thai Airways. The high number of this ratio caused by a increase on total liabilities and a decrease on shareholder's equity of those companies. Some of the companies mentioned have low interest coverage ratio which means those companies don't generate sufficient revenues to meet interest expenses.

4.1.2 Compound Annual Growth Rate (CAGR)

The researcher will elaborate the analysis on CAGR of selected companies from each element. The net sales of PT. Garuda Indonesia kept increasing every year. In terms of Cost of Goods Sold (COGS) and total operating expense, PT. Garuda Indonesia, Tbk. had the highest percentage among others mainly caused by increase in

resources, inclusion on aircraft, an increase in fuel expenses up to 27%, and depreciation of Rupiah against US Dollar. Due to this increase, it leads to declining growth of gross profit, operating income, profit before income tax, and net income since 2011. The other regional airline which suffered the same is Thai Airways, eventhough it's still better than PT. Garuda Indonesia, Tbk.

4.1. 3 DuPont Analysis

The following table listed the results on DuPont analysis which previously conducted by the researcher on each of regional airlines.

Table II: DuPont Analysis

	GIAA	**SA**	**CP**	**KA**	**TA**
Net Profit Margin	-0.09	0.02	0.03	-0.04	-0.08
Total Asset Turnover	1.27	0.67	0.62	0.51	0.61
Equity Multiplier	3.38	1.67	3.32	10.66	7.44
ROA	-12.03%	1.59%	1.83%	-1.95%	-5.08%
ROE	-40.69%	2.65%	6.08%	-20.80%	-37.80%

As seen from the table, both ROA and ROE of PT. Garuda Indonesia, Tbk. are the lowest compared to other Asian Pacific regional airlines. Cathay Pacific holds the highest ROA and ROE among other airlines, followed by Singapore Airlines. Both Korean Air and Thai Airways experienced a negative ROA and ROE and it caused by the negative percentage of net profit margin.

4.2. Optimal Capital Structure

On the analysis of optimal capital structure of PT. Garuda Indonesia, Tbk., the researcher has determined several key assumptions. The key assumptions are:

1. The risk premium used in this analysis is 9.05% based on Damodaran on country risk premium.
2. Tax rate is 25% based on Indonesia tax regulation on corporate tax
3. The risk-free rate is based on SBI rate in 2014 which is 7.02%.

Before taking further to optimal capital structure analysis, the researcher has examined the actual capital structure of PT. Garuda Indonesia, Tbk. from 2010 until 2014. The actual capital structure of the company is listed below.

TABLE III: Actual Capital Structure of PT. Garuda Indonesia, Tbk.

Company	**2010**	**2011**	**2012**	**2013**	**2014**	**Average Capital Structure**
GIAA	2,90	1,20	0,25	0,47	0,80	1,16

4.2.1 Cost of Equity

To determine the cost of equity, the researcher used unlevered beta for air transport in emerging country of 0.48 gathered from Damodaran, since the current beta of PT. Garuda Indonesia, Tbk. is low. The following table listed the cost of equity.

TABLE IV: Scenario Analysis of Cost of Equity of PT. Garuda Indonesia, Tbk.

Debt Ratio	D/E Ratio	Levered Beta	Cost of Equity
0%	0.00	0.48	11.36%
5%	0.05	0.50	11.54%
10%	0.11	0.52	11.73%
15%	0.18	0.54	11.94%
20%	0.25	0.57	12.18%
25%	0.33	0.60	12.45%
30%	0.43	0.63	12.76%
35%	0.54	0.67	13.12%
40%	0.67	0.72	13.54%
45%	0.82	0.77	14.03%
50%	1.00	0.84	14.62%
55%	1.22	0.92	15.35%
60%	1.50	1.02	16.25%
65%	1.86	1.15	17.41%
70%	2.33	1.32	18.97%
75%	3.00	1.56	21.14%
80%	4.00	1.92	24.40%
85%	5.67	2.52	29.83%
90%	9.00	3.72	40.69%
95%	19.00	7.32	73.27%
99%	99.00	36.12	333.91%

4.2.2 Cost of Debt

After determining the cost of equity, the calculation of after-tax cost of debt must be done before proceeding to calculate WACC and firm value. Since EBIT of the company is negative, the researcher used average of EBIT to conduct this analysis which is US$117.416.195and the maximum tax benefit is US$42.018.026.

TABLE V: Scenario Analysis of Cost of Debt of PT. Garuda Indonesia, Tbk.

Debt Ratio	Debt Amount (in USD)	Interest Coverage Ratio	Bond Rating	Rd	T	Rd(1-T)
0%	0	∞	AAA	6.40%	25%	4.80%
5%	81,764,277	24.55	AAA	6.40%	25%	4.80%
10%	163,528,554	12.27	AA	6.90%	25%	5.18%
15%	245,292,831	8.18	A+	7.05%	25%	5.29%
20%	327,057,108	6.14	A	7.15%	25%	5.36%
25%	408,821,385	4.91	A-	7.40%	25%	5.55%
30%	490,585,662	4.09	BBB	8.25%	25%	6.19%
35%	572,349,939	3.51	BB+	9.50%	25%	7.13%
40%	654,114,216	3.07	BB	10.50%	25%	7.88%
45%	735,878,493	2.73	B+	11.25%	25%	8.44%
50%	817,642,771	2.45	B	11.75%	25%	8.81%
55%	899,407,048	2.23	B	11.75%	25%	8.81%
60%	981,171,325	2.05	B	11.75%	25%	8.81%
65%	1,062,935,602	1.89	B-	12.50%	25%	9.38%
70%	1,144,699,879	1.75	B-	12.50%	25%	9.38%
75%	1,226,464,156	1.64	B-	12.50%	25%	9.38%
80%	1,308,228,433	1.53	B-	12.50%	25%	9.38%
85%	1,389,992,710	1.44	CCC	13.25%	25%	9.94%
90%	1,471,756,987	1.36	CCC	13.25%	25%	9.94%
95%	1,553,521,264	1.29	CCC	13.25%	25%	9.94%
99%	1,618,932,686	1.24	CC	14.50%	25%	10.88%

4.2.2 Weighted Average Cost of Capital and Firm Value

Since the cost of equity and after tax cost of debt has been calculated, the weighted average cost of capital and firm value can be determined. The results on scenario analysis of WACC and Firm Value is listed below.

TABLE VI: Scenario Analysis of WACC and Firm Value of PT. Garuda Indonesia, Tbk.

Debt Weight	Equity Weight	After tax cost of debt (kd)	Cost of Equity	WACC	Firm Value (in USD)
0%	100%	4.80%	11.36%	11.36%	774,922,086
5%	95%	4.80%	11.54%	11.20%	786,360,434
10%	90%	5.18%	11.73%	11.07%	795,438,003
15%	85%	5.29%	11.94%	10.94%	804,865,505
20%	80%	5.36%	12.18%	10.82%	814,236,738
25%	**75%**	**5.55%**	**12.45%**	**10.73%**	**821,092,269**
30%	70%	6.19%	12.76%	10.79%	816,263,188
35%	65%	7.13%	13.12%	11.02%	799,064,900
40%	60%	7.88%	13.54%	11.27%	781,274,583
45%	55%	8.44%	14.03%	11.51%	764,881,502
50%	50%	8.81%	14.62%	11.72%	751,559,845
55%	45%	8.81%	15.35%	11.75%	749,300,863
60%	40%	8.81%	16.25%	11.79%	747,055,420
65%	35%	9.38%	17.41%	12.19%	722,481,168
70%	30%	9.38%	18.97%	12.25%	718,739,713
75%	25%	9.38%	21.14%	12.32%	715,036,810
80%	20%	9.38%	24.40%	12.38%	711,371,865
85%	15%	9.94%	29.83%	12.92%	681,554,674
90%	10%	9.94%	40.69%	13.01%	676,758,202
95%	5%	9.94%	73.27%	13.10%	672,028,769
99%	1%	10.88%	333.91%	14.11%	624,319,110

When the debt ratio is 10%, the WACC hit the lowest among other levels of debt and the firm value hit the highest. Thus, the debt ratio of 25% and equity ratio 75% is the the optimal capital structure of PT. Garuda Indonesia, Tbk. in 2014.

5. Conclusion and Recommendation

After data analysis has been done, the researcher would sum up the financial highlights, CAGR, DuPont analysis, and optimal capital structure of the company of PT. Garuda Indonesia, Tbk. in comparison with other regional airlines in Asian Pacific area. During the selected period, PT. Garuda Indonesia, Tbk. has shown a decreasing financial performance. First factor is the increase on domestic jet fuel price. Although the international jet fuel price in 2014 had been decreasing, it turned out the domestic jet fuel price was rose up to 12%. Moreover, the proportion of capital structure of PT. Garuda Indonesia, Tbk. in 2014 was 45% debt and 55% equity. However, by using the approach of weighted average cost of capital (WACC), it is found that the optimal capital structure for the company in 2014 is 25% debt and 75% equity by using average of EBIT of the firm rather than actual EBIT in 2014.

Based on the conclusions, the researcher has made two recommendations to improve the financial performance of PT. Garuda Indonesia, Tbk. Since the declining financial performance of the firm was due to the fluctuative jet fuel price and depreciation of Rupiah towards USD, it is better for the company use hedging

strategy to avoid any significant changes toward those elements. Second, in terms of capital structure, since airline companies have high business risks, it is preferable to use small amount of debts and maximize the equity proportion to finance its company.

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