Capital Structure Impact on EBIT-EPS of an Indonesian and a Japanese Airport Company:

Angkasa Pura II (Persero) & Japan Airport Terminal Co., Ltd.

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**INTRODUCTION**

The capital structure depicts the proportionate relationship between debt and equity. The different means of financing represent the financial structure of an enterprise. The balance sheet (which consists of liabilities plus equity) describes a company’s financial structure. The EBIT-EPS approach to capital structure is a tool that businesses use to determine the best ratio of debt and equity to finance businesses’ assets and operations. The EBIT-EPS approach is a way to mathematically project how a balance sheet’s structure will impact its earnings.

This study examines the impact of capital structure on the company performance using EBIT-EPS analysis method. This study analyzes the capital structure of an Indonesian airport company Angkasa Pura II (Persero) and japanese airport company Japan Airport Terminal Co. Angkasa Pura II (Persero) currently operates 16 airports. These airports are Soekarno-Hatta (Jakarta), Halim Perdanakusuma (Jakarta), Kualanamu (Medan), Supadio (Pontianak), Minangkabau (Padang), Sultan Mahmud Badaruddin II (Palembang), Sultan Syarif Kasim II (Pekanbaru), Husein Sastranegara (Bandung), Sultan Iskandarmuda (Banda Aceh), Raja Haji Fisabilillah (Tanjungpinang), Sultan Thaha (Jambi), Depati Amir (Pangkal Pinang) and Silangit (Tapanuli Utara), Banyuwangi (East Java), Tjilik Riwut (Palangkaraya), and Kertajati Airport (West Java). Soekarno-Hatta International Airport in Jakarta is the busiest airport in Indonesia. The Soekarno-Hatta Soekarno Hatta International Airport served 64 million passengers per year in 2018.

Japan Airport Terminal Co. is a Japan-based company involved in the management and operation of Haneda airport terminal building and the distribution of merchandise and catering businesses. The company operates in three business segments: The Facility Management and Operation segment, which primarily operates facilities within the Haneda airport terminal building and leases facilities to airline companies; The Merchandise Sale segment, which is engaged mainly in the sale of commercial products to air travelers in Haneda Airport, Narita Airport, Kansai International Airport, and the wholesale of commercial products to airport terminal companies; and The Catering segment, which specializes in the provision of food and beverage products to passengers of Haneda Airport and Narita International Airport, and in the manufacture and sale of in-flight and frozen food. As of March 31th 2014, the company had 16 subsidiaries and ten associated companies. In Japan, Haneda Airport has two operation areas. Civil Aviation Bureau operates the airside area, and the landside area is operated by Japan Airport Terminal Co.

This paper examines the factors that affect companies’ capital structure decisions and the impact of these capital structure decisions on the profitability and performance of Angkasa Pura II (Persero) and Japan Airport Terminal Co. The EBIT–EPS method is employed using secondary data from the companies’ financial reports.

**LITERATURE REVIEW**

The EBIT-EPS approach is a scientific tool that managers often use in deciding the right amount of debt and equity financing in a business’s capital structure. Using the EBIT-EPS approach, a business plots its performance at different possible debt-to-equity, such as 40 percent debt to 60 percent equity. In a basic graph, the earning per share as a data point is plotted for each earning level before interest and taxes at different debt-to-equity ratios. The graph is then analyzed to determine the ideal level of debt-to-equity for the business.

The EBIT-EBT approach studies the leverage composition, such as comparing alternative financing plans at different levels of EBIT. Put merely, EBIT- EPS analysis examines the effect of financial leverage on the EPS with varying EBIT levels or under alternative financial plans.

The approach examines the impact of financial leverage on EPS’ behavior under different financing alternatives and varying EBIT levels. EBIT-EPS analysis is used for choosing the combination of the various financing alternatives. It helps select the alternative that yields the highest EPS.

We know that a firm can finance its investment from various sources, such as from borrowed capital or equity capital. The proportion of multiple sources may also be varied under various financial plans. In every financing plan, the firm’s objectives lie in maximizing EPS.

**FRAMEWORK**

In general, the company’s goal is to obtain optimal profits and maintain their continuity. A company’s success or failure is characterized by its ability to achieve its’ objectives, which, in this case, is profit. If the company’s profits increase, the profit before interest and tax (EBIT) will also increase, and the company will be better able to pay dividends.

If EBIT increases with a constant debt ratio, it can better pay interest and taxes, so EPS also increases. Thus, the optimum capital structure composition occurs when EPS reaches the highest point at a certain EBIT distribution level.

In projecting the capital structure using the EBIT-EPS approach, the maximum EPS calculation requires the maximum debt ratio and EBIT. The maximum debt ratio is used to measure the ultimate limit of a company’s ability to repay debt.

Based on the existing theoretical basis, the conceptual framework of this research is as follows:

***Company***

***Financial Report***

***Maximum Debt Limit***

***EBIT Approximation***

***Approach***

***EBIT - EPS***

***Maximum***

***EPS***

**Impact of Capital Structure on EBIT-EPS**

**Optimum Capital Structure Composition for the Future**

**METHODOLOGY**

This study is empirical research that uses secondary data, where the data on the research object are taken and quoted from existing datasets. The data are then processed to obtain the answers to the research questions. The data used are based on the annual report of Angkasa Pura II (Persero), representing an Indonesian airport company, and Japan Airport Terminal Co., representing an airport operator in Japan.

The Secondary Data Analysis Method (sometimes referred to as Secondary Research Method) is used in this research. According to Hakim (1982), as stated in Johnston (2014), The Secondary Data Analysis Method is “any further analysis of an existing dataset which presents interpretations, conclusions or knowledge additional to, or different from, those presented in the first report on the inquiry as a whole and its main results.”

Heaton (2004), as stated in Andrews (2012), described the Secondary Data Analysis as “a research strategy which makes use of pre-existing quantitative data or pre-existing qualitative data to investigate new questions or verify previous studies.” The name of the research strategy is equivalent to the research method (Heaton, 2004).

The Secondary Data Analysis can thus be explained as follows:

First, ASD is not a data analysis method; it is a research method. Second, ASD uses or utilizes secondary data, such as existing data. Third, according to Heaton, the purpose of ASD could be to explore and find new research questions and reverify previous studies’ results.

Secondary Data can be divided into two types; the research data (already researched by others) and institutional administrative data. These data can be quantitative or qualitative.

In the Secondary Data Analysis, the research steps are as follows:

1. Establish sources of data/information (e.g., schools, universities, The Ministry of Education and Culture);
2. Collect the available data (in the “document”);
3. Normalize the data if necessary and possible (making data from as many sources as possible as “being in the same form”);
4. Analyze the data (e.g., calculate, tabulate, quantitative data map, or compare various regulations and examine them).

**RESULTS**

The debt-equity (capital structure) of Angkasa Pura II (Persero) during the study period is presented in the following table.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Year | Debt Capital (in IDR) | Equity Capital (in IDR) | Ratio | #number of shares | Market Price/Equity  (in IDR) |
| 2014 | 439.107.286.384 | 13.195.945.119.906 | 0,03327593 | 5.000.000 | 2.639.189 |
| 2015 | 1.197.640.648.209 | 16.235.768.329.734 | 0,07376557 | 5.000.000 | 3.247.154 |
| 2016 | 4.738.642.367.645 | 19.927.415.011.080 | 0,23779514 | 7.000.000 | 2.846.774 |
| 2017 | 6.199.325.644.551 | 22.037.810.924.994 | 0,28130406 | 7.000.000 | 3.148.259 |
| 2018 | 9.515.130.954.748 | 23.616.984.829.886 | 0,40289355 | 7.000.000 | 3.373.855 |

The company did not issue any further equity shares during 2016-2018 and added the number of shares in 2016. The company raised its long-term debt from the bank loan and bonded other long-term liabilities from 2016 to 2018 contentiously. These results increase the in-debt burden of the company, reduce liquidity position and long-term solvency position. Higher payment interest reduces EBT and taxes and increases earnings available to shareholders and the company’s EPS (wealth maximization).

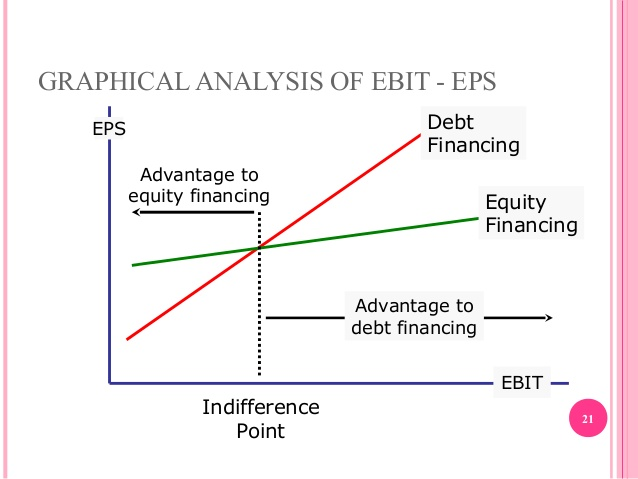
Compared with Japan Airport Terminal Co., there is not much difference in the capital Structure of Angkasa Pura II (Persero). Japan Airport Terminal Co. did not issue any further equity, even during 2013- 2018. The debt-equity (capital structure) of Japan Airport Terminal Co. during the study period is presented in the following table.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Year | Debt Capital (in Million JPY) | Equity Capital (in Million JPY) | Ratio | #number of shares | Price/Equity  (in JPY) |
| 2013-2014 | 39.730 | 102.397 | 0,38799965 | 84.476.500 | 1.212 |
| 2014-2015 | 58.476 | 108.808 | 0,53742372 | 84.476.500 | 1.288 |
| 2015-2016 | 51.284 | 115.512 | 0,44397119 | 84.476.500 | 1.367 |
| 2016-2017 | 43.546 | 119.637 | 0,36398439 | 84.476.500 | 1.416 |
| 2017- 2018 | 58.280 | 128.408 | 0,4538658 | 84.476.500 | 1.520 |

Based on the analysis, using the financial report of the 2016-2017 period, Angkasa Pura II as a public company which is 100% shareholder from government and Japan Airport Terminal Co. as a private company where the number of share trades in Japan Exchange Stock as IPO (Initial Public Offering). It can be analyzed by calculating the EBIT-EPS, with the following results, where the capital structure should be chosen to produce higher EPS.

|  |  |  |  |
| --- | --- | --- | --- |
|  | AP II | JAT | |
| **2016 BASE YEAR** | **2016 BASE YEAR** | **2016 BASE YEAR** |
| in Rupiah | in million Yen | in million Yen (Stock Price in 2016 is 4.200 Yen |
| Liability (bond + Long term bank loan) | 4.738.642.367.645 | 51.284 | 51.284 |
| Equity | 19.927.616.816.764 | 115.512 | 115.512 |
| S1 = total stock | 7.000.000 shares | 84.476.500 shares | 84.476.500 shares |
| Price/stock (non-IPO) | 2.846.802 | 0,0013674 | 0,0042000 |
| S2 = Non-Current Liability/price per stock | 1.664.549 | 37.505.132 | 12.210.476 |
| S1 + S2 | 8.664.549 shares | 121.981.632 shares | 96.686.976 shares |
|  |  |  |  |
| EBIT (TAHUN+1) | 2.919.581.256.843 | 13.368 | 13.368 |
| INTEREST (TAHUN+1) or Financial Cost | 287.782.155.684 | 417 | 417 |
|  |  |  |  |
| Interest \* (1-Tax), Tax = 25% | 215.836.616.763 | 313 | 313 |
| S1 / (SI+S2)\*(1-T) | 0,606 | 0,519 | 0,655 |
| 0,75 - (S1/(S1+S2)\*(1-T)) | 0,144 | 0,231 | 0,095 |
| **EBIT EPS(2017)** | **1.498.004.848.228** | **1.356** | **3.302** |
| **EBIT in 2017** | **2.919.581.256.843** | **13.368** | **13.368** |
|  | DEBT | DEBT | DEBT |

The graphical analysis is presented in the following graph.



When the EBIT is greater than the EBIT-EPS, the companies should use debt for financing. Meanwhile, when the EBIT is less than the EBIT EPS, the companies should issue new stock.

**CONCLUSION**

The companies’ debt-equity ratios are very high; a high amount of debt in the capital structure indicates a debt burden, which is terrible for owners’ wealth and results in a low liquidity position. It reduces the owner’s fund and confidence as the risk of the equity holder’s increase. An increase in loans also results in a decrease in the company’s value. Thus, it is suggested that the companies issue partial or full equity shares to raise the owners’ funds, reduce debt proportion, and maintain optimum capital structure for shareholders’ wealth. The implementation will result in a positive effect on the companies’ future business.

 During 2016-2018, both Angkasa Pura II (Persero) and Japan Airport Terminal Co. did not issue the shares. It is considered the right decision because the EBIT during the period is higher than EBIT EPS, so the company should choose capital structure debt.

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