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Absolute and Relative Valuation Models to Accommodate Pre-IPO Appraisal of an Airport Authority: A Case Study of PT. Angkasa Pura II Persero

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Abstract: The study had firstly scanned the PT. Angkasa Pura IIs external industry through the help of PESTEL framework and Porters Five Forces. The internal business was then assessed by using the VRIN framework and the financial ratio analysis. The study proceeded to look into the perspectives of both the absolute and relative valuations of the company. Absolute valuation models were to uncover the companys underlying, sole value as a firm of its own and had employed the FCFF and three-stage DDM models as the courses. Relative valuation models were to stage market perceptions on the firm value and had taken advantage of the forward P/E and EV/EBITDA multiples as the courses. Both absolute and relative valuation models developed for this study had fundamentally concluded that Angkasa Pura II could very well raise more capital than what had been intended to. The study significantly leaned more towards the absolute valuation models than the counterparts. The absolute valuation models had additionally prompted significantly high intrinsic value for the company, which in return should appeal to prospective investors to purchase the companys stock at a high initial price.

Keywords: Airport, Fair price, IPO, valuation

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INTRODUCTION

Chief Executive Officer of the Capital Market Supervisory at OJK (Indonesia's Financial Services Authority) Nurhaida was recorded to state in a press release that OJK had continued to encourage state-owned enterprises and their subsidiaries to give IPO a go and become public-listed companies (Hamdani, 2016). According to her, public investors were more enthusiastic about putting in their money if the stocks they were about to purchase belonged to the companies that were owned by the government as opposed to those that were owned by private entities. State-owned enterprises and their subsidiaries ergo strived to move forward with the IPO.

Among those state-owned enterprises was Angkasa Pura II. Having almost no immediate competitors within the industry, the Company has continued to provide airport and airport-related services for the aviation industry of the western part of Indonesia. The Company is always vocal in terms of resourcing the open public for capital. In 2016, Angkasa Pura II had proceeded to issue company bonds valued at a total of IDR 2 trillion. Budi Karya Sumadi, the Company's president director at the time, stated in a press release that the Company's move on the obligation issuance was to help fund the terminals development (terminal III) and revitalization (terminals I and II) at the Soekarno-Hatta International Airport (Elsa, 2016). According to him, the act should also help usher in the Company's planned IPO in the future.

Meanwhile, Muhammad Awaluddin, the Company's president director in the office today, stated in

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another press release that by the end of year 2021, the Company would have to acquire investments that could amount to IDR 85 trillion (Andi, 2017). These required capital expenditures would be subjected mostly to the developments of smart airports and airport cities and several airport expansion projects in the western part of Indonesia. The company thus contemplated to select IPO as one of the sources of its funding.

A press released on CNN Indonesia stated that Angkasa Pura II had plotted to place a new capital to be sold to the public at IPO that amounted to 25% of the total capital that was already authorized by the Company (Gumelar, 2016). This 25% figure was equal to five trillion rupiahs. Another press released on Kompas stated that the company arguably aimed to gain as much as four trillion rupiahs capital from its IPO, an amount that is believed to match the annual internal funding that is usually budgeted by the Company (Supriyatna, 2016). The Company's financial performance is at stake.

A study conducted by Peristiani and Hong (2004) showed that positive investment returns on market participants could feasibly be generated by those companies that actually exhibited strong financial performance even before they went public. Prospective investors surely look to be protected from purchasing stocks of a company that has performed poorly, and the company's reputation itself is at stake. Thus, assessing the pre-IPO financial state of Angkasa Pura II is believed to be indeed crucial before the Company's goes ahead with an IPO decision. The assessment would require the valuation of the Company's net worth. It is necessitated in order to accurately determine the underlying fundamental values of the eventual shares. Effective measurements are to be established.

To use the Capital Asset Pricing Model (CAPM) but without an over-reliance on historical data was believed to be most effective to deal with firm valuation and its risks. All valuation models are based upon a perception that markets are inefficient and imprecise value assessments are bound to happen (Damodaran, 2012b). An absolute value of a company is less exposed to the market perceptions, whereas a relative value of a company is more likely to reflect those perceptions of market. Taking into account both values might help to exact a firm's net worth that was less imprecise as opposed to dwelling on each value alone.

LITERATURE REVIEW

Benefits and costs of an IPO

In order to survive in a competitive environment, companies need to keep growing and keep innovating. Going public is one way to accomplish such things and thus offers many benefits for firms. There are two main reasons for the going public decision, the primary offering and the secondary offering (Geddes, 2003).

The primary offering is the opportunity to raise equity capital for the firm, which can be used to expand the business of the company or to reduce its debt levels. A company can only survive in a competitive environment when it satisfies its customers. Innovation is, therefore very important. A company might need money for its manufacturing and for R&D spending which it might not have. This capital can thus be raised by having an IPO.

Meanwhile, the secondary offering is the ability to raise funds for the existing shareholders. When having an IPO, founders and initial shareholders are able to diversify their holdings, since they can convert some of their wealth into cash at a future date (Ritter & Welch, 2002). By issuing shares, it will be easier to cash out. Therefore, taking a company public might offer managers an exit route (Reuvid, 2003). A recent study that analyzed firms that decided to go public between 2007 and 2011 shows that most firms are underpriced during an IPO relative to what the market is willing to pay as soon as they start trading. On average, investors are therefore able to get a listing gain on a short-term basis (Trivedi, 2012).

An IPO may offer several other financial advantages. Firstly, it may be useful to value the company for taxation and estate purposes (Reuvid, 2003). Secondly, having an IPO enables companies to borrow more cheaply. Around the IPO date, the interest rate on a company's short-term credit falls. Thus, the number of banks that are willing to lend money to the company increases (Pagano, Panetta, & Zingales, 1998). Thirdly, firms that decide to go public establish efficient governance structures which

minimize their agency costs and thereby maximize their firm value (Daines & Klausner, 2001; Ilias, Razak, & Rahman, 2015). By going public, companies subject themselves to get monitored by outsiders, which might also enhance the value of the company. Finally, public trading of a firm's stocks influences managerial incentives in two ways:

1. A poorly performing public firm may become a target for a takeover; this threat will prevent managerial misbehavior;
2. Public trading provides managerial incentives according to the continuous performance of the company's share price (Holmström & Tirole, 1993).

An IPO might also help to attract and incentivize staff, since their share options are more valuable if the shares are quoted (Reuvid, 2003).

Non-financial benefits also exist with having an IPO. Firstly, there is an increase in publicity. However, this reason only plays a minor role in most companies (Ritter & Welch, 2002). Secondly, there are competitive benefits for having an IPO. When going public, firms are able to grab market share from its private competitors. Even firms that have only enough internal capital available may decide to go public, driven by the possibility that their competitors may go public too (Chemmanur & He, 2011). Public trading itself can add value to a firm, since it may give customers, investors, creditors and suppliers more faith in the firm. Thirdly, some managers might have a passion for their company and business success can be related to their personal goal. It is a vital part of their life and tied up to their self-esteem and sense of worth. Taking a company public might therefore also express gratitude and personal satisfaction of the company's manager (Reuvid, 2003).

In spite of all the benefits, there are disadvantages, or rather costs, to having an IPO. The costs are mainly distinct between the direct ones and the indirect ones (Ritter, 1987), both of which mainly affect small companies. One could argue that it might be beneficial for some companies to actually stay private instead of going IPO.

Direct costs of the issue consist mainly of registration fees, investment banking costs, legal expenses, and accountancy and audit fees. In addition, there are also less quantifiable costs in terms of management time. Many of these direct costs are relatively fixed, so there are considerable economies of scale. Having an IPO is thus relatively more costly for small firms. In order to go public, companies may also decide to conduct a marketing road show, which also inflicts the opportunity costs of management time (Ritter, 1987).

Indirect costs are associated with the underpricing of a company's shares. Investors are less informed than managers about the true value of a company, so there is information asymmetry. If IPO were priced on average with zero discount, risk-averse investors would prefer to buy shares in the after-market. To make sure investors gain enough money, stock prices will be underpriced at an IPO. So the initial discount on IPOs might be interpreted as a return to the investors for taking risk, but the initial owners essentially leave money on the table, since they could have sold their shares at a higher price if they had kept them and would have sold them in the after-market (Jenkinson & Ljungqvist, 2001).

Some other disadvantages of an IPO are further explained as follows.

1. When analyzing the long-run performance of companies that have recently gone public, it appears that their shares underperform relative to other quoted companies that are up to five years after they had gone public. These underperformances might be explained by an over-optimism on the future prospects of the companies;
2. There might be a conflict of interest between the intermediaries. If the investment bank, which acts as a sponsor for the company, also leads as the underwriter, there might be an incentive to put a low price on the shares to reduce the underwriting risk (Jenkinson & Ljungqvist, 2001);
3. The IPO process requires companies to disclose financial and business information. The disclosure rules thus might be more disadvantageous for innovative and research-oriented businesses. These firms relatively invest a lot of capital in research and development and may possess innovative business information which might have not yet been available to their competitors. Pioneer firms on the other hand, may be advantageous in the economic environment.

By being innovative and establishing brand awareness, companies might have a competitive advantage over their rivals. However, they also may face new-entry risk: the risk to encourage new entry by revealing valuable information about investment and financing decisions. When an innovative company decides to have an IPO and has to disclose important business information, it might lose some of its competitive advantages.

Pre-IPO procedures in Indonesia

Indonesia Stock Exchange (2016) (IDX) has established primary requirements in order for a company to Go Public within Indonesia. A company must first determine on which one of the two Boards of Listing it shall belong to. The Main Board of Listing is intended for those companies that yield such substantial scales and outstanding financial track records, whereas the Development Board of Listing is intended for those that are yet able to fulfill the requirements of the Main Board of Listing, including companies with measurable prospects but still generate no profit and companies in aid of other entities. The procedures to go-public are depicted in Figure 1 below.

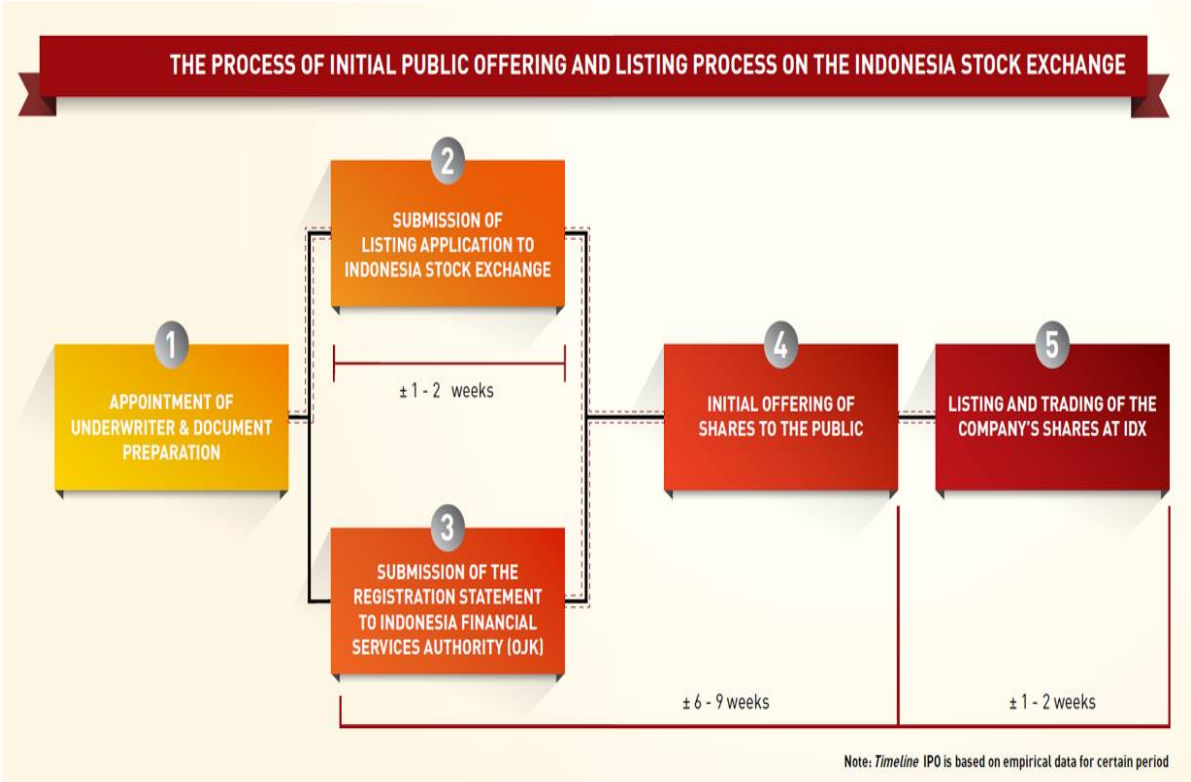

Figure 1. IPO Procedures on IDX. Source: Go Public Information Center, Indonesia (2016)

Company valuation models

Valuation models are required to not only value a company's assets or business but also to reflect on its expected future cash flows. Arguably, there are still those who work professionally in the financial industry or students who major in finance that misjudge pricing a company or an asset as valuation. The value should not be confused with price. Price is a specific amount that is agreed upon a seller and a buyer while doing a transaction. Additionally, when one is looking into a company's competitor value to judge the reasonable price for a company is also considered as pricing (Damodaran, 2006; Purnamasari & Fitdiarini, 2015). A company value, on the other hand, can be different between those who try to assess it, because they might judge the company's future prospects differently from one another. Ultimately, the main goal of company valuation is for the investors to not pay more for assets than what they are worth (Damodaran, 2012a).

Absolute valuation models

An absolute value relates to the intrinsic characteristics of an asset or company, which is why it is more commonly referred to as an intrinsic value. The good thing about this value is that it is less exposed to market moods and perceptions, and it shall help uncover the underlying characteristics of a firm that may not surface. This value also fundamentally focuses more on the overall business of a company rather than just its stocks (Damodaran, 2012a). An absolute valuation model, however, would frankly require far more explicit inputs, which are quite prone to data manipulation. In addition, there is no guarantee that an absolute value will emerge as either under- or overvalued (Bahri, Mahsina, & Poniwati, 2017; Damodaran, 2012a).

Intrinsic value is commonly computed through a Discounted Cash Flow (DCF) valuation model. Within this model, the intrinsic value is a general representation of expected future cash flows as the form of value that are discounted to their present values with a certain required return. This concept is fundamentally expressed by the following Formula 1 (Gitman, Juchau, & Flanagan, 2015).

$$V_0 = \sum_{t=1}^{n} \frac{CF_t}{(1+r)^t} \tag{1}$$

V_0 : Value of asset today (t = 0)
n : Number of cash flow periods
CF_t : Projected cash flow at period t
r : Discount rate or required rate of return

Relative valuation models

Unlike an absolute value, a relative value of a company is much more likely to reflect market perceptions. It is judged upon a relative basis, after all. Note that it is built on the assumptions that markets are correct in the aggregate and implicit ones are likely made about the variables. A relative value would thus require less explicit information to be generated.

Relative valuation, or rather called multiples valuation, compares the value of an asset to similar assets in the market (Damodaran, 2006). In order to settle a relative valuation of a firm, comparable firms and their market values would firstly need to be identified. Those market values would then need to be converted into standardized values. This process of standardizing would create price multiples that are comparable to one another. The common price multiples are as follows.

- Revenue multiples : Price/Sales (P/S), Enterprise Value/Sales (VS)
- Book multiples : Price/Book Value (PBV)
- Earnings multiples : Price/Earnings (P/E) and variants, Price/Cash Flow (P/CF), Enterprise Value/EBITDA (EV/EBITDA)
- Industry specific multiples : Price/Labor Hour, Price/kwh, etc.)

METHODS

Analytical framework

The analytical framework is presented on the following Figure 2.

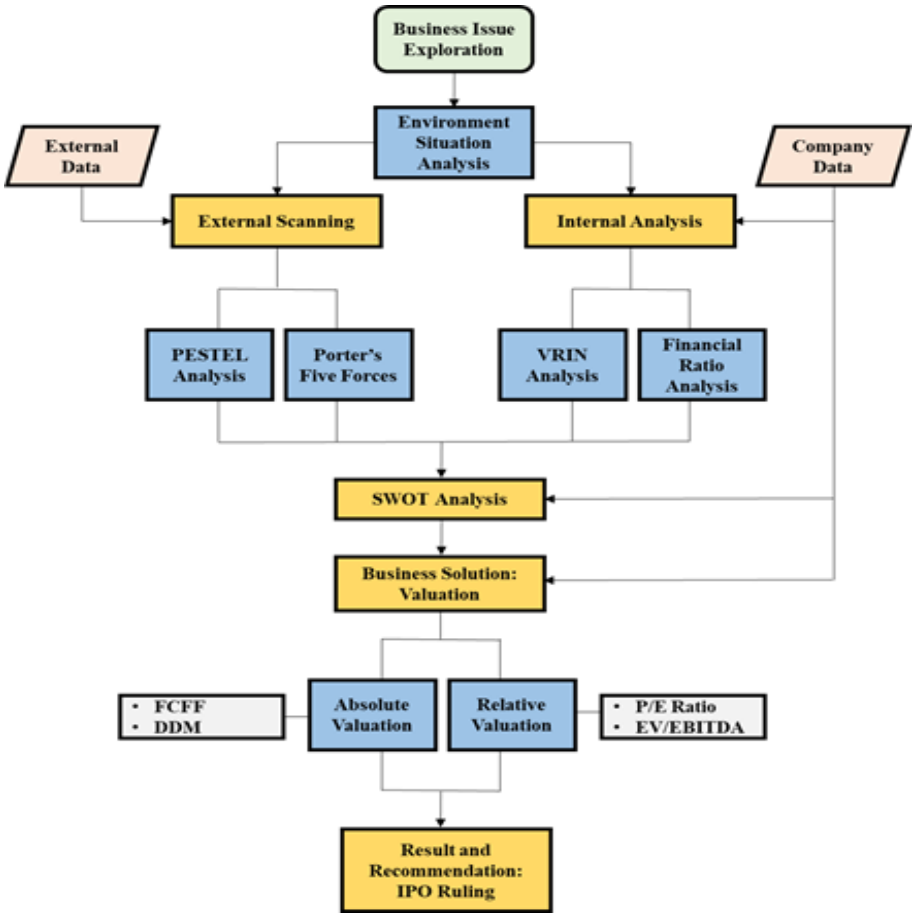

Figure 2. Analytical Framework

Setting off from the business issue presented earlier in the introduction part, environment situation analysis was conducted to gather the required information and to better understand the situational positioning of Angkasa Pura II on the market. This analysis was comprised of four more elaborate analyses, with the PESTEL framework and Porter's Five Forces used to analyze the external business environment, and VRIN framework and financial ratios used to analyze the internal business environment. SWOT analysis was then conducted to evaluate both environments and the Company's business as a whole. The analysis would determine the variables of strengths and weaknesses from within the company to execute future endeavors as well as the opportunities and threats that might arise.

The business solution was comprised of both the absolute and relative valuation models. The absolute valuation model would elaborate the Free Cash Flow to the Firm (FCFF) and the Dividend Discount Model (DDM). As for the relative valuation model, P/E and EV/EBITDA multiples would be used. The result was to be derived from the process and it would take into account both models as a weigh of confidence level was assigned to each approach within the respective model. IPO ruling could then be prompted to the Company's prospective investors.

Data analysis and techniques

The study was believed to fall under the analytical research, where an urgent and critical evaluation of the material was to be made by analyzing available information or facts (Kothari, 2004). Both qualitative and quantitative methods were utilized to process the retrieved data, with the latter being employed mostly. Thus, a mixed method was implemented. The method should provide the overall strength that was more beneficial than simply using one of the two methods alone. In addition, literature review was also conducted to gather some of the secondary data that were required to construct the analytical framework shown in Figure 1. The data analysis and the techniques employed for the purpose of this study is presented in Table 1 below.

Table 1: Data analysis and techniques

Analysis	Technique(s) Employed	Target
PESTEL Analysis (General Analysis)	• Literature review • Press news review • Self-observation	Brief scanning of the external environment state of Angkasa Pura II observed from the political, economic, social, technological, environmental, and legal views of the nation.
Porter's Five Forces (Industry and Competitor Analysis)	• Literature review • Press news review • Self-observation	Brief scanning of the aviation industry state where Angkasa Pura II belonged and the Company's competitive positioning within that industry.
VRIN Analysis (Company Analysis)	• Literature review (company data included) • Self-observation	Comprehensive coverage of Angkasa Pura II's capabilities state through which VRIN analysis would ultimately determine the company's competitive advantages.
Financial Statements Analysis	•Literature review (company data included) • Self Computation Profitability ratios Liquidity ratios Activity ratios Debt ratios • Self-observation	A comprehensive inspection of Angkasa Pura II and the related industry's financial ratios through which financial performance of the Company could be evaluated and its financial state determined.
SWOT Analysis	• Literature review (company data included) • Self-observation	Concise and relevant reasoning on Angkasa Pura II's strengths, weaknesses, opportunities, and threats that may weigh in on the valuation deed.
VRIN Analysis (Company Analysis)	• Literature review (company data included) • Self-observation	Comprehensive coverage of Angkasa Pura II's capabilities state through which VRIN analysis would ultimately determine the company's competitive advantages.
Absolute Valuation	•Literature review (company data included) • Self Computation - Free Cash Flow to the Firm (FCFF) - Dividend Discount Model (DDM)	Absolute (intrinsic) value of the supposedly Angkasa Pura II's sold-to-public shares.
Relative Valuation	•Literature review • Self Observation • Self-computation (market ratios) - Forward P/E - Forward EV/EBITDA	The relative value of the supposedly Angkasa Pura II's sold-to-public shares as perceived by the (inefficient) market.

RESULTS AND DISCUSSION

Environment Analysis

External and internal analyses first commenced, and the results are summarized along the SWOT variables of Angkasa Pura II shown in Table 1 below.

Table 2: SWOT variables

Strengths	Weaknesses
• Tight-knit operational activities that are highly-regulated • The capability to provide multiple types of airport services • Infrastructure and facilities that meet international standards • Certified and qualified human resources • Sizeable amount of liquidity • Ample capability to pay off short-term obligation • Proficiency in utilizing financial leverage to fund projects • Profitability level that continues to grow above the industry level	• Such company vigor in the form of monopolized business • Slowing trend and low revenues earned on company assets • Lower-than-industry returns earned by the shareholders
Opportunities	**Threats**
• The Country's positive GDP growth rates over the course of the 2010 series • Government initiatives to open new flight routes that reach the remote area • Aviation industry growth rate that is twice as rapid as GDP's growth rate • Stock market's increasing popularit • Shifting perception of air travel to affordable • Airport business operations beyond the Country's borders • Enforcement of ASEAN Open Sky Policy • Dim competitive force that may allow a market leader position	• Such a weak competitive force that might lead a monopolized business run, breaking the law • Unforeseen airplane accidents that cause a tremendous loss on the Company's profitability • South-East Asia countries that hold high fragility index, indicating less political stability

With the strengths constituted, several opportunities presented could be acted accordingly by Angkasa Pura II. One of those opportunities is to enter the stock market and raise capital from there. The Company should seek the opportunity to remedy its equity returns. The aviation industry is one of the fastest-growing industries in Indonesia. Prospective investors are guaranteed not to miss that chance.

In regards to Angkasa Pura II's current financial state, there's a sizeable amount of liquidity, which translates to substantial and wise investment decision and activities. Profitability level has also continued to grow above the industry level, and the Company is quite proficient in utilizing financial leverage to fund future projects and initiatives. One thing that may raise future concern is the Company's asset management that is exhibiting slowing trend. In addition, the increasing ratios in debt management is a bit alarming that the Company could potentially be utilizing too much leverage in the future. It is clear that Angkasa Pura II has continued to increase its ownership on assets, especially the fixed ones (property, plant, equipment). No doubt the Company is currently exhibiting a healthy trend on its financial leverage practice. However, there would come a time for the Company to seek capital source options other than loans or obligations to acquire such assets, and the public is surely one of the most promising ones as urged by the government. Thus, the move to go public and raise capital from there has seemed even more appealing than before.

Absolute valuation models

The study had first looked into the perspective of absolute valuation of the Company Angkasa Pura II. Absolute valuation models were to uncover the Company's underlying, sole value as a firm of its own and had employed the FCFF and three-stage DDM models as the courses.

Free cash flow to the firm

FCFF model for Angkasa Pura II was constructed and Table 3 below summarized the equity value computation for the Company.

Table 3: FCFF Financial Model (in IDR billion)

Year	EBIT (1-T)	Add: Depreciation	Less: Capex	Less: NWC 7	FCEF	Terminal Value TV	PV @12,4480%
2017							
2018F	2,539.78	1,009.28	3,938.89	(812.85)	423.03		376.20
2019F	2,960.90	1,124.49	3,189.37	460.84	435.18		344.16
2020F	3,380.78	1,247.37	3,401.76	486.54	739.85		520.34
2021F	3,799.36	1,369.64	3,385.00	511.38	1,272.62		795.96
2022F	4,216.60	1,491.31	3,368.25	536.17	1,803.49		1,003.13
2023F	4,632.46	1,612.37	3,351.49	560.92	2,332.43		1,153.7
2024F	5,046.88	1,732.83	3,334.74	585.60	2,859.37		1,257.79
2025F	5,459.81	1,852.69	3,317.98	610.23	3,348.28		1,323.89
2026F	5,871.21	1,971.93	3,301.23	634.80	3,907.11		1,359.22
2027F	6,281.00	2,090.58	3,284.47	659.21	4,427.89	63,057.46	20,878.14
						Enterprise Value	29,012.53
						Less: Debt Outstanding	6,332.79
						Equity Value	22.679.74

To configure a ruling on Angkasa Pura II's IPO decision, Table 4 below exhibited the fair price of a Company's presumable stock according to the FCFF model.

Table 4: Fair Price FCFF Model

Angkasa Pura II	Par Value	Par/Share	Shares Issued
Capital Authorized for IPO	IDR 5,000,000,000,000	IDR 100	50,000,000,000 shares
Gain Targeted	IDR 4,000,000,000,000		
Total	IDR 9,000,000,000,000	Target Price $=\frac{\text{IDR 9,000 billion}}{\text{50 billion shares}}$	
		=IDR 180.00/share	
Fair Price(FCFF)			
Equity Value	IDR 22,679,741,896,509.40	Fair Price $=\frac{\text{IIDR 22,679.74 billion}}{\text{50 billion shares}}$	
Shares Issued	50,000,000,000 shares		
		=IDR 453.59/share	

Equity value of IDR 22,679.74 billion translated to an absolute value or fair price of IDR 453.59 for every Angkasa Pura II's share sold to public. This figure was arrived at by dividing the Company's equity value to the presumable five hundred shares of stock sold to public. Since the Company had targeted a gain of IDR 4,000 billion from an IPO conduct, its targeted stock price was thus approximated at IDR 180.00. It fundamentally showed here that Angkasa Pura II could surely gain more than just IDR 4,000 billion worth of capital if the Company chose to move forward with IPO.

Monte Carlo simulation was subsequently ran for ten thousand schemes and the range of the model's intrinsic value was depicted in Figure 3 below.

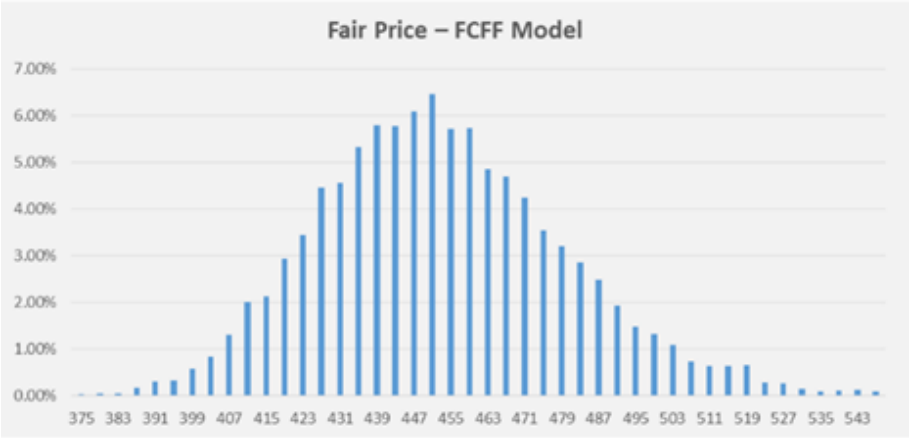

Figure 3. FCFF Fair Price Range

The figure was interpreted that the Monte Carlo simulation had resulted in a range of intrinsic value between IDR 371 and IDR 551 with a certainty of 99.90

Dividend discount model

In order to construct a three-stage DDM model, extraordinary growth periods were firstly determined and transition growth periods would follow suit till the sustainable growth rate was hit. Extraordinary growth rate periods occurred on years 2018F-2022F, transitional growth rates periods on years 2023-2027F, and sustainable growth rate periods on years 2028 and beyond. Table 5 summarized the computation of the DDM model.

Table 5: DDM Financial Model (in IDR billion)

Year	Net Income Earnings	Payout Ratio	Dividends Growth Rate	Dividends	TV (g3=5.07%)	PV @13.8969%
2017						
2018F	1,961.60	22.93%	-	449.87		394.98
2019F	2,318.44	21.72%	11.92%	503.50		388.13
2020F	2,753.60	20.47%	11.92%	563.53		381.40
2021F	3,190.91	19.77%	11.92%	630.71		374.79
2022F	3,693.92	19.11%	11.92%	705.91		368.29
2023F	4,136.10	18.91%	10.55%	780.39		357.47
2024F	4,588.69	18.68%	9.18%	852.04		342.67
2025F	5,038.84	18.46%	7.81%	918.59		324.36
2026F	5,493.55	18.18%	6.44%	977.75		303.12
2027F	6,012.46	17.64%	5.07%	1,027.33	51,254.91	14,230.96
					Equity Value	17,466.17
				Shares Outstanding(in shares)		7,000,000
				Values per share (in IDR)		2,495,166.87

The equity value for Angkasa Pura II's outstanding shares was calculated at IDR 17,466.17 billion, which worked out to a value per share of IDR 2.50 million. Note that the Company had seven million outstanding shares with a par value of IDR 1 million per share. Table 6 exhibited the fair price of a Company's stock according to the DDM model.

Table 6: Fair Price DDM Model

Angkasa Pura II	Par Value	Par/Share	Shares Issued
Capital Authorized for IPO	IDR 5,000,000,000,000	IDR 100	50,000,000,000 shares
Gain Targeted	IDR 4,000,000,000,000		
Total	IDR 9,000,000,000,000	Target Price $=\frac{\text{IDR 9,000 billion}}{\text{50 billion shares}}$	
		=IDR 180.00/share	
Fair Price(DDM)			
Equity Value	IDR 17,466,168,056,860.80	Fair Price $=\frac{\text{IIDR 17,466.17 billion}}{\text{50 billion shares}}$	
Shares Issued	50,000,000,000 shares		
		=IDR 349.32/share	

An absolute value or fair price of IDR 349.32 was obtained for every Angkasa Pura II's share sold to public according to the DDM model, which was not as high but still near to the fair price calculated from the FCCF model. For the record, the FCFF model had actually taken into account the entire authorized equity of the Company, whereas the DDM model only devised the common equity that generated dividends for the shareholders. Nonetheless, similarly to the FCFF model, it also showed here that Angkasa Pura II could gain more than just IDR 4,000 billion worth of capital if the Company chose to move forward IPO.

Similarly to the FCFF Model, Monte Carlo simulation was also subsequently ran for ten thousand schemes and the range of the model's intrinsic value was depicted in Figure 4 below.

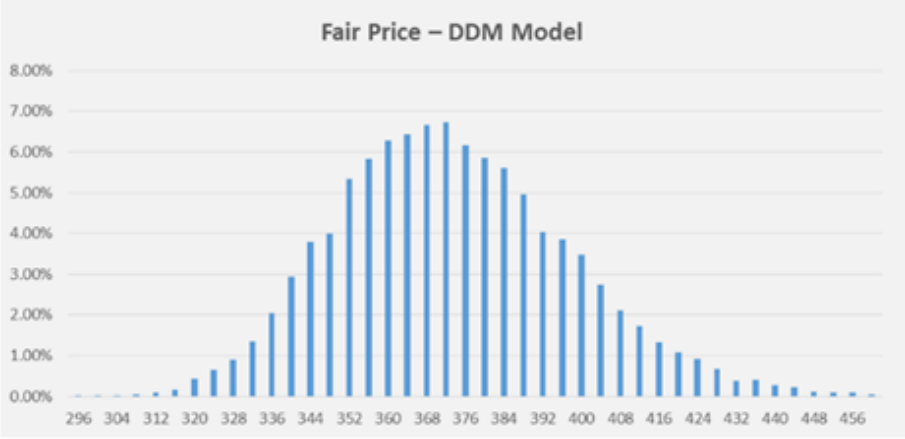

Figure 4. FCFF Fair Price Range

The simulation had resulted in a range of intrinsic value between IDR 296 and IDR 460 with a certainty of 99.90The use of triangular distribution was made apparent by both Figures 3 and 4. This distribution was to ensure that the financial model had the highest probability of occurrence.

Relative valuation models

The study proceeded to look into the perspectives of both the relative valuations of the Company Angkasa Pura II. These models were to stage market perceptions on the firm value and had taken advantage of the forward P/E and EV/EBITDA multiples as the courses.

Forward P/E

In order to construct a relative valuation model by using forward P/E multiples, earnings (net income) for the year 2018 was first assumed to grow or decline by the peer companies respective growth (CAGR) as shown in Table 7 below.

Table 7: Peer Companies CAGR

Peer Companies	2014 Revenue Balance	2017 Revenue Balance	CAGR
Danang Airport Services JSC	VND 216,740.14	VND 292,992.45	+10.57%
Southern Airports Services JSC	VND 2,040,069.43	VND 2,369,394.90	+5.11%
Noi Bai Airport Services JSC	VND 616,514.04	VND 525,652.63	-5.18%
Shenzhen Airport Co Ltd	CNY 2,973.30	CNY 3,320.81	+3.75%
Xiamen International Airport Co Ltd	CNY 1,352.50	CNY 1,660.24	+7.07%
Auckland International Airport Ltd	NZD 508.50	NZD 683.90	+10.38%

The forward Earnings Per Share (EPS) was then calculated accordingly to each company's outstanding shares. The Trailing Twelve Months (TTM) market stock price of each company was to be divided by its forward EPS to arrive at its forward P/E multiple. At last, the average of all forward P/E multiples was to act as the industry average forward P/E ratio, which computation was shown in Table 8 below.

Table 8: Industry Average Forward P/E)

Peer Companies	Market Price (IDR, 31/12/17)	2017 EPS (IDR)	TTM P/E	2018F EPS (IDR)	Forward P\E
Danang Airport Services JSC	50,281.31	6,074.65	8.28	6,686.78	7.52
Southern Airports Services JSC	16,225.06	1,169.39	13.87	1,229.17	13.20
Noi Bai Airport Services JSC	17,529.44	1,626.96	10.77	1,541.92	11.37
Shenzhen Airport Co Ltd	18.141.07	667.26	27.19	697.70	26.00
Xiamen International Airport Co Ltd	46,874.85	2,877.55	16.29	3,079.73	15.22
Auckland International Airport Ltd	62,307.08	5,192.26	12.00	5,764.52	10.81
				Industry Average	14.02

Table 9 exhibited the computed fair price of a Company's stock by multiplying the average forward P/E ratio obtained to the expected EPS.

Table 9: Fair Price Forward P/E

Angkasa Pura II	Par Value	Par/Share	Shares Issued
Capital Authorized for IPO	IDR 5,000,000,000,000	IDR 100	50,000,000,000 shares
Gain Targeted	IDR 4,000,000,000,000		
Total	IDR 9,000,000,000,000	Target Price $=\frac{\text{IDR 9,000 billion}}{\text{50 billion shares}}$ =IDR 180.00/share	
Fair Price(P/E)			
shares Issued	50,000,000,000 shares	Fair price=14.02 x IDR 39.23 =IDR 550.02/share	
Expected EPS (2018F)	$=\frac{\text{IDR 1,961.60 billion}}{\text{50 billion shares}} = \frac{\text{IDR 39.23}}{\text{share}}$		

A relative value of IDR 550.02 was obtained for every Angkasa Pura II's share sold to public according to the industry average of P/E ratio, which was quite above the results generated from FCFF and DDM models. Unlike the two absolute values, this relative value of Angkasa Pura II was supposedly exposed to the market. The value had reflected market perceptions upon the Company. There bounded to be differences between these two different kinds of values. Nonetheless, the relative value of IDR 550.02 still suggested that Angkasa Pura II would be able to raise capital of more than IDR 4,000.00 should they choose to go public and raise equity capital.

The risk assessment would not be suitable to conduct on the relative valuation models since the CAGR itself actually ignored volatility and implied that the growth during the periods was steady. CAGR was essentially a smoothed rate of growth over a period. It could not be assumed that the rate will remain the same in the future, hence the decision to develop the relative valuation models of only one year forward. Nonetheless, CAGR was actually straightforward enough that it could be calculated conveniently

in order for a relative valuation model to be generated.

Forward EV/EBITDA

The EV/EBITDA valuation model would act as an alternative to the P/E valuation model developed. The six peer companies subjected to that model would still serve as the industry for Angkasa Pura II in this model. In order to construct such model, the Enterprise Value (EV) of each of the peer companies would first need to be determined by adding the outstanding debt balance and subtracting the cash balance to the market capital (equity) of the respective peers. The calculation is shown in Table 10.

Table 10: Peer Companies Enterprise Values (in billions)

Peer Companies	Market Cap	Debt Bal.	Cash Bal.	Enterprise Value
Danang Airport Services JSC	VND 187.78	VND 55.80	VND 16.25	VND 227.34
Southern Airports Services JSC	VND 3,136.81	VND 83.92	VND 265.11	VND 2,955.62
Noi Bai Airport Services JSC	VND 224.53	VND 61.05	VND 46.70	VND 238.87
Shenzhen Airport Co Ltd	CNY 15.98	CNY 0.57	CNY 2.63	CNY 13.92
Xiamen International Airport Co Ltd	CNY 6.34	CNY 0.00083	-	CNY 6.34
Auckland International Airport Ltd	NZD 8.40	NZD 2.14	NZD 0.004	NZD 10.53

The EV would act as the nominator to EBITDA's denominator to arrive at the EV/EBITDA multiple. The TTM multiple would denominate the 2017 EBITDA balance of each peer company as their respective financial statements would have it, whereas the forward multiple would denominate the 2018F EBITDA balance. The average of all forward EV/EBITDA multiples was to serve as the industry average forward EV/EBITDA ratio, which computation was shown in Table 11 below.

Table 11: Industry Average Forward EV/EBITDA (in billions, unless multiples)

Peer Companies	EV	2017 EBITDA	TTM EV/EBITDA	2018 EBITDA	Forward EV/EBITDA
Danang Airport Services JSC (VND)	227.34	46.46	4.89	51.37	4.43
Southern Airports Services JSC (VND)	2,955.62	359.38	8.22	377.76	7.82
Noi Bai Airport Services JSC (VND)	238.87	38.44	6.21	36.45	6.55
Shenzhen Airport Co Ltd (CYN)	3.92	0.89	15.65	0.92	15.08
Xiamen International Airport Co Ltd (CYN)	6.34	0.58	10.95	0.62	10.22
Auckland International Airport Ltd (NZD)	10.53	0.80	13.10	0.89	11.87
				Industry Average	9.33

The Market Cap, or rather Equity Value, for Angkasa Pura II, could be calculated by subtracting the EV with the 2018F debt outstanding balance and then adding the 2018F cash balance to the equation. The 2018F debt balance was developed through the FCFF model, and it amounted at IDR 6,780.14 billion, which comprised both the 2018F Long-term Loan account balance of IDR 4,785.91 and the Bonds Payable account balance of IDR 1,994.23 billion. Meanwhile, since the Company had a historical Cash balance to the overall securities balance ratio of a mere 0.01%, no Cash account was developed through the FCFF model. The Equity Value would, at last, be divided to the presumable fifty billion shares of stock to arrive at a fair price as shown in Table 12 below.

Table 12: Fair Price Forward EV/EBITDA

Angkasa Pura II	Par Value	Par/Share	Shares Issued
Capital Authorized for IPO	IDR 5,000,000,000,000	IDR 100	50,000,000,000 shares
Gain Targeted	IDR 4,000,000,000,000		
Total	IDR 9,000,000,000,000	Target Price $=\frac{\text{IDR 9,000 billion}}{\text{50 billion shares}}$ =IDR 180.00/share	
Fair Price (EV/EBITDA)			
Enterprise Value	=IDR 3,386.38 billion9.33 =IDR 31,595,034,882,244.10	Fair Price $=\frac{\text{IDR 24,814.90 billion}}{\text{50 billion shares}}$ =IDR 496.30/share	
Less: 2018F Debt Balance	IDR 6,780,139,595,118.87		
Add: 2018F Cash Balance	-		
Equity Value	IDR 24,814,895,287,125.20		

The use of EV/EBITDA model was beneficial due to the ignorance towards the distorting effects of depreciable assets, interest expenditures on loans, and taxation policies. A relative value of IDR 496.30 was obtained for every Angkasa Pura II's share sold to public according to the industry average of EV/EBTIDA ratio, which was actually quite close to the absolute value generated from the FCFF model. Just like the predecessor, the relative value of the EV/EBITDA model still suggested that Angkasa Pura II would be able to raise capital of more than IDR 4,000.00 billion if they chose to go public.

Confidence level

The purpose of assigning weighted confidence level on the various valuation models that had been developed on this study is to let the record show on which valuation model the study is more confided in. The weighted confidence level on each valuation model was listed in Table 13 below.

Table 13: Weighted Confidence Level

Valuation	Valuation Models	Target Price by APII	Fair Price per Share	Risk Assessment (Range)	Confidence Level
Absolute	FCFF	IDR 180/share	IDR 453.59	IDR 371-IDR 551	75%
	DDM		IDR 349.32	IDR 296-IDR 460	15%
Relative	Forward P/E		IDR 550.02	-	5%
	Forward EV/EBITDA		IDR 496.30	-	5%

It is highly believed that the absolute valuation models are most preferable measurements to its relative counterparts, and that the FFCF model is the more reliable one among the two valuation models. The study was thus most confident in both the absolute valuation models, more so on the FCFF model for its intricacy in contemplating historical financial records to then forecast the Company's future financial performance.

Unlike the two absolute valuation models that had also assessed the Company's underlying values and risk accordingly, relative valuation models had had to seek out the global Asia-Pacific industry in order to be developed. No peer companies within Indonesia that could actually be pitted against Angkasa Pura II in order to generate that relative value of the Company. There was no guarantee that the Asia-Pacific industry might indeed reflect Angkasa Pura II's industry in particular despite being an integral part of it. This, however, does not change the fact that the intrinsic values and relative values were there to broaden the perspectives of the Company in a journey to devise an IPO ruling of its own.

CONCLUSION AND RECOMMENDATIONS

Assessing the pre-IPO financial state of Angkasa Pura II is believed to be crucial before Angkasa Pura II goes ahead with an IPO decision. The assessment would require the valuation of the Company's net worth. Both absolute and relative valuation models developed for the purpose of this study had fundamentally suggested that Angkasa Pura II could very well raise more capital than what had been

intended to, should the IPO route was taken by the Company. Absolute valuation models prompted significantly high intrinsic value for the Company, which in return should appeal to prospective investors to purchase the Company's stock at a high initial price. Ultimately, a ruling to go-public is highly encouraged by this study, and that the Company should certainly be going into it with more confidence as to raise more than just IDR 4 trillion capital.

In addition, this paper was to let the record show that the study was in no affiliation of any kind with Angkasa Pura II or its related parties. All assumptions made for the purpose of this study were self-generated and made in accordance with all the analyses developed. The result of this study was by no means guaranteed a proper basis for any further uses, including further studies. Mishaps and losses are at own risks and this study was not to be taken for granted nor held responsible under such circumstances.

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