

ESTIMATING THE COMPANY VALUE OF PT ADORA ENERGY TBK COMPANY VALUATION OF A COAL MINING INDUSTRY

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Abstract

PT Adaro Energy Tbk is one of the major coal mining companies in Indonesia. It is currently Indonesia's second largest thermal coal producer. PT Adaro Energy Tbk itself had been operated since 1992 in South Borneo but then it was still a small company that engaged in coal mining sector. This company releases its open public and offering period on July 8th until 10th 2008 and listed its shares in Jakarta Stock Exchange on July 16th 2008 with PT Danatama as the Underwriter. When established on July 28th 2004, this company has basic capital of IDR 8.000.000.000.00. From year to year since it was established. PT Adaro Energy Tbk has an excellent performance. In 2010, the production reaches 42.2 million tons and the sales reaches 2.7 million dollars. An excellent performance company surely has to maintain and always improve its performance. Therefore, a valuation is needed to measure the value of the company and knowing how to enhance the value. Author used three kind of approaches to estimate the value of the company, which are asset-based approach, income approach and market approach. Author will also determine the share value based on the value that had been determine using each approaches that have been told before. The research is made to estimate the value of PT Adaro Energy Tbk and by that, knowing what should be done by the company depend on what should be done by the company depend on what is the value of the company. Authow will use some valuation methods and techniques accordance with the company conditions and structures. The methods that used in this research paper were asset-based approach, income approach (Discounted Cash Flow), and market approach. Author will use the consolidated financial statements of PT Adaro Energy Tbk from year 2006-2011. Using those three kinds of approaches, author will find the estimated value. Then, after find the estimated value of the company, the stock value will be found by using the equation which will be used in analysis. The reasearch shows

that the value of PT Adaro Energy Tbk is ranged between IDR 43.361.609.266.373.00 to IDR 354.399.618.736.223.00 and the stock value with the current share price IDR 1.460.00 (31 July 2012) is ranged between IDR 972.91 to IDR 10.378.65. This shows that PT Adaro Energy Tbk has a big potency to enhance its value and PT Adaro Energy Tbk is still a good choice to investors. This research is focuses on determining the estimated value and share value of PT Adaro Energy Tbk. In one of the approaches, author will use the P/E ratio from the public coal mining industries which listed in IDX. This research paper contains about measuring the estimated value and share value of PT Adaro Energy Tbk using three approaches. This valuation is important in order if PT Adaro Energy Tbk wants to sell its assets or wants to do merger and acquisition. It also important for a company to enhance its company value.

Keywords: Valuation;asset-based approach;income approach;discounted cash flow; market approach

Category: Finance

Introduction

In this recent years, where the business competition is getting more intense, a company has to be increasing its business excellence by increasing its value. To increase its value, a company first must know its value. Therefore, company valuation is very important to all companies. Valuation according to the definition in English is an opinion or a judgment of a value of something. Meanwhile, value, according to Oxford Advanced Learner's Dictionary, is how much something is worth in money or other goods for which it can be

exchanged. The other definition of it is the quality of being useful or important. We can say that valuation is another form of an opinion or judgment because valuation is not fully an exact thing, though the process is always based on the scientific method. In valuation process, it still takes the opinion and subjective estimation from the appraiser or the valuator.

In all corporate finance theories, valuation has already evolved significantly. The valuation concept in finance is based on the outlook about the company value or the assets, which is the amount of future earnings which generated from those assets. It is quite make sense knowing that people buying assets not just to have them but to expect the revenue from those assets. Therefore, the valuation concept in finance is a concept of valuation which based on the income approach. In this income approach, it quantifies all the income which is might be received by the company in the future and accumulated it to become indication of value. However, the income is received in the future, then the concept of time value of money is also applied, so that the future earning need to be converted to become present value, then accumulated it. This method is called Discounted Cash Flow.

Meanwhile, the valuation concept begins and increases from the intangible property appraisal, like patent, copyright, brand, data basis, etc. The value of intangible assets might be a kind of assets that can't be separated usually called goodwill. If a business or company has intangible assets, the appraiser has to be convinced that the value of intangible assets is already reflected before, apart whether the intangible assets that can be identified has assessed separately or not. The company valuation itself has some purposes, such as for the merger and acquisition activities, devastation or increasing the equity from the new partners in a company, and selling shares to the public. By doing valuation of business, the business actors can know the fair value of the equities of a company to acquisition funding and also the investors have to measure the capital gain from shares to assess the property development.

In this research, the company that being evaluated is PT Adaro Energy Tbk. PT Adaro

Energy Tbk is one of public company in Indonesia. The company is engaged in the mining sector, more precisely in coal mining and it is currently Indonesia's second largest thermal coal producer. The mining is located in South Borneo and the office is located in Menara Karya 23rd Floor, Jakarta. The company release its open public and offering period on July 8th until 10th 2008, and listed its shares in Jakarta Stock Exchange as ADRO on July 16th 2008. This research expected to help the management board of PT Adaro Energy Tbk in deciding the corporate financial decisions by determining the estimated value of PT Adaro Energy Tbk and give recommendations to enhance it.

Literature Study

Business valuation, sometimes called company valuation is an activity or a process which has to be done to get the opinion, judgement, or an estimation of a a company or an institution, or an ownership in a company. According to the Lawrence W. Tuller's *Small Business Valuation Book*, valuation can be defined as an art, not a science because it needs the accurate estimation from the appraiser although the scientific method is still needed. Hence it is not fully an exact thing. Aswath Damodaran on his book, *Damodaran on Valuation*, described that the role in valuation is various depends on it arenas, such as in portfolio management, acquisition and merger analysis, and corporate finance.

Zimmerer, Scarborough, and Wilson on their book, *Essentials of Entrepreneurship and Small Business Management* said that to determine the value of the company, there are several approaches that can be used, such as income approach, market approach, and asset based approach. Income approach is using the income as the guidance by using the discounted cash flow to determining the current value using forecasted cash flow over determined period of time horizon and adjusting it to the present value. Market approach is based on transaction data that has ever happened in the market. Asset based approach is based on the company's assets or its balance sheet. This research mainly focuses on using the Discounted Cash Flow approach.

Methodology

As said before, this research is using three approaches to determine the company value, which are income approach (Discounted Cash Flow), asset based approach, and market approach. In asset based approach, author will use the balance sheet of PT Adaro Energy Tbk as the reference. Therefore, the company value from the asset based approach is based on the value of net asset. In market approach, the value is determined by using P/E ratio. It reflects the current market condition to determine the company value. In Discounted Cash Flow method, author will determine the current value of PT Adaro Energy Tbk from the Free Cash Flow. Free Cash Flow is the cash that a company is able to generate after laying out the money required to maintain or expand its asset base. By projecting the future Free Cash Flow, a company value can be estimated.

$$V = \frac{FCF}{r} \quad (1)$$

The company value will be the total present value of the projected future Free Cash Flow. In determining the Free Cash Flow of the company, the Weighted Average Cost of Capital will be the discount factor and inflation rate will be the perpetuity growth. The cash flow only works in several projected years. Therefore, there is Terminal Value which reflects over unlimited time, with the assumptions that the company already has stable growth. In this approach, author will use the financial report of PT Adaro Energy Tbk form year 2006-2011 to make the forecast financial statements for five years ahead.

Data Analysis

Asset-Based Approach

In estimating the value of PT Adaro Energy Tbk using the asset based approach, the company value can be determine from the balance sheet 2011 by looking directly to the total assets of the company because the company has been noted the assets and liabilities in the balance sheet at fair value.

TABLE I. Net Asset PT Adaro Energy Tbk from Balance Sheet 2011

ASSETS	BALANCE SHEET 2011
Cash and cash equivalent	IDR 5.288.342.127.255.04

Restricted Cash	IDR 8.904.239.149.12
Trade Receivables	IDR 4.460.087.023.405.44
Inventories	IDR 496.025.734.534.40
Prepaid taxes	IDR 241.994.699.255.68
Loans	IDR 492.524.599.056.00
Other current assets	IDR 155.336.864.901.12
Recoverable taxes	IDR 917.392.120.624.00
Goodwill	IDR 9.514.629.000.929.92
Advanced and Prepayments	IDR 1.540.423.910.269.44
Fixed Assets	IDR 13.553.169.850.207.70
Investment	IDR 4.366.871.656.925.12
Mining properties	IDR 11.777.535.873.488.00
Other non current assets	IDR 734.841.024.274.56
Total Assets	IDR 53.548.078.724.275.50

From the balance sheet above, the total asset of PT Adaro Energy Tbk is IDR 53.548.078.724.275.50. Therefore, the value of PT Adaro Energy Tbk using Asset Based approach is equal to the total assets, which is idr 53.548.078.724.275.50. The next step is to estimate the share value of PT Adaro Energy Tbk. The formula to determining the share value is:

$$V = \frac{A}{N} \quad (2)$$

Therefore, the share value of PT Adaro Energy Tbk using value from asset based approach is:

$$V = \frac{A}{N}$$

A. Market Approach

In estimating the value of Of PT Adaro Energy Tbk using the market approach, the author use the P/E ratio of the coal mining sector, industry and the P/E ratio of PT Adaro Energy Tbk as the multiplier. These P/E ratio will be multiplied with the net income of PT Adaro Energy Tbk. The net income of PT

Adaro Energy Tbk is IDR 5.224.290.273.056.96.

$$V = \frac{P}{E} \times \frac{FCF}{WACC} \quad (3)$$

Therefore, the company value using market approach is:

TABLE II. Value of PT Adaro Energy Tbk using market approach

USING SECTOR P/E RATIO	
P/E ratio	11.27
Value	IDR 58.877.751.377.351.90
Share Value	IDR 1.119.63
USING INDUSTRY P/E RATIO	
P/E ratio	15.02
Value	IDR 78.468.839.901.315.50
Share Value	IDR 1.732.12
USING COMPANY P/E RATIO	
P/E ratio	8.30
Value	IDR 43.361.609.266.372.80
Share Value	IDR 634.54

B. Discounted Cash Flow

Discounted Cash Flow is an approach to valuing the company by using the projected future Free Cash Flow and discount it with Weighted Average Cost of Capital as the discount factor. In calculating the estimated value of PT Adaro Energy Tbk using Discounted Cash Flow approach, author first made the estimation of sales forecast and made the pro forma financial statements of PT Adaro Energy Tbk. To make the pro forma financial statements, author use the Compound Annual Growth Rate (CAGR) which generated from the revenue of year 2006-2011.

TABLE III. Revenues of PT Adaro Energy Tbk 2006-2011 (expressed in billion Rupiah)

Year	2006	2007	2008	2009	2010	2011

Revenues	9.748	11.593	18.093	26.938	25.578	37.543

The formula to determine the Compound Annual Growth rate is:

$$CAGR = \left(\frac{V_n}{V_0} \right)^{\frac{1}{n}} - 1 \quad (4)$$

Therefore, the CAGR of PT Adaro Energy is:

$$CAGR = \left(\frac{37.543}{5.224} \right)^{\frac{1}{5}} - 1$$

There are three scenarios that used in this research, which are Pessimistic, Most Likely and Optimistic. The CAGR for most likely scenario is 31.0%. For the pessimistic scenario, author assuming the CAGR is 21.0% or about 60% from the most likely scenario. This condition may happen because there are an issue that the government will raise the export tax, so there will be decreasing in the export volume for the coal mining industries in Indonesia. For the optimistic scenario, the amount of CAGR is 36% or about 116% from the most likely scenario. The author assumes that PT Adaro Energy Tbk can increase their market share because they have a lot of project from the PT Adaro Energy Tbk itself and its subsidiaries that have numerous competitive advantage.

In generating the Discounted Cash Flow, author made some assumptions.

TABLE IV. Key Assumptions

No	Description	Value
1	Discount Rate (WACC)	13.10%
2	Cost of Equity (re)	22.73%
3	Risk-free rate (rf)	5.75%
4	Market Risk Premium (rM-rf)	9.60%
5	Beta (β)	1.77
6	Cost of Debt (rd)	4.60%
7	Perpetuity Growth (g)	4.45%
8	Corporate tax	25.00%
9	Debt proportion (Wd)	49.95%
10	Equity Proportion (We)	50.05%

1) Most Likely Scenario

TABLE V. Discounted Cash Flow for Most Likely Scenario

Free Cash Flow		CAGR	31.00%			
(most likely)						
(in idr)	2011	2012	2013	2014	2015	2016
Operating Income	IDR 12,145,826, 938,230.70	IDR 15,911,033, 289,082.20	IDR 20,843,453, 608,697.70	IDR 27,304,924, 227,394.00	IDR 35,769,450, 737,886.20	IDR 46,857,980, 466,630.90
Tax	IDR 3,036,456,7 34,557.68	IDR 3,977,758,3 22,270.56	IDR 5,210,863,4 02,174.44	IDR 6,826,231.0 56,848.51	IDR 8,942,362,6 84,471.55	IDR 11,714,495, 116,657.70
NOPAT	IDR 9,109,370,2 03,673.04	IDR 11,933,274, 966,811.70	IDR 15,632,590, 206,523.30	IDR 20,478,693, 170,545.50	IDR 26,827,088, 053,414.70	IDR 35,143,485, 349,973.20
Depreciation & Amortization	IDR 1,251,949,2 71,905.92	IDR 1,640,053,5 46,196.76	IDR 2,148,470,1 45,517.75	IDR 2,814,495,8 90,628.25	IDR 3,686,989,6 16,723.01	IDR 4,829,956,3 97,907.14
Operating cash flow	IDR 10,361,319, 475,579.00	IDR 13,573,328, 513,008.40	IDR 17,781,060, 352,041.10	IDR 23,293,189, 061,173.80	IDR 30,514,077, 670,137.70	IDR 39,973,441, 747,880.30
Less: Change in net work capital	IDR 501,939,81 4,734.40	IDR 1,520,443,2 13,970.06	IDR 1,991,780,6 10,300.78	IDR 2,609,232,5 99,494.03	IDR 3,418,094,7 05,337.17	IDR 4,477,704,0 63,991.70
Capital expenditure	IDR 4,395,363,3 29,696.64	IDR 1,362,562,6 32,205.96	IDR 422,394,415 ,983.85	IDR 130,942,268 ,954.99	IDR 40,592,103, 376.05	IDR 12,583,552, 046.57
Free cash flow	IDR 5,464,016,3 31,147.92	IDR 10,690,322, 666,832.40	IDR 15,366,885, 325,756.40	IDR 20,553,014, 192,724.80	IDR 27,055,390, 861,424.50	IDR 35,483,154, 131,842.10
Terminal value						IDR 428,451,426 ,134,396.00
Discount factor (WACC)	13.10%					
Perpetuity growth	4.45%					
PV FCF		IDR 9,452,076,2 72,743.12	IDR 12,013,198, 628,727.80	IDR 14,206,422, 723,851.60	IDR 16,534,818, 319,293.70	IDR 19,173,625, 319,275.60
PV of terminal value		IDR 378,824,445 ,734,699.00	IDR 334,945,694 ,967,033.00	IDR 296,149,363 ,749,133.00	IDR 261,846,761 ,928,522.00	IDR 231,517,386 ,579,740.00
Total PV of free cash flow		IDR 302,897,527 ,843,632.00				

Based on the table above. the value of PT Adaro Energy Tbk for most likely scenario is **IDR 302,897,527,843,632.00**

2) *Pessimistic Scenario*

TABLE VI. Discounted Cash Flow for Pessimistic Scenario

(pessimistic)		CAGR	21.00%			
	2011	2012	2013	2014	2015	2016
Operating Income	IDR 12,145,826,938,230.70	IDR 14,696,450,595,259.20	IDR 17,782,705,220,263.60	IDR 21,517,073,316,519.00	IDR 26,035,658,712,987.90	IDR 31,503,147,042,715.40
Tax	IDR 3,036,456,734,557.68	IDR 3,674,112,648,814.79	IDR 4,445,676,305,065.90	IDR 5,379,268,329,129.74	IDR 6,508,914,678,246.98	IDR 7,875,786,760,678.85
NOPAT	IDR 9,109,370,203,673.04	IDR 11,022,337,946,444.40	IDR 13,337,028,915,197.70	IDR 16,137,804,987,389.20	IDR 19,526,744,034,741.00	IDR 23,627,360,282,036.60
Depreciation & Amortization	IDR 1,251,949,271,905.92	IDR 1,514,858,619,006.16	IDR 1,832,978,928,997.46	IDR 2,217,904,504,086.92	IDR 2,683,664,449,945.18	IDR 3,247,233,984,433.66
Operating cash flow	IDR 10,361,319,475,579.00	IDR 12,537,196,565,450.50	IDR 15,170,007,844,195.20	IDR 18,355,709,491,476.10	IDR 22,210,408,484,686.10	IDR 26,874,594,266,470.20
Less:						
Change in net work capital	IDR 501,939,814,734.40	IDR 1,029,977,661,076.49	IDR 1,246,272,969,902.56	IDR 1,507,990,293,582.08	IDR 1,824,668,255,234.33	IDR 2,207,848,588,833.54
Capital expenditure	IDR 4,395,363,329,696.64	IDR 923,026,299,236.29	IDR 193,835,522,839.62	IDR 40,705,459,796.32	IDR 8,548,146,557.23	IDR 1,795,110,777.02
Free cash flow	IDR 5,464,016,331,147.92	IDR 10,584,192,605,137.80	IDR 13,729,899,351,453.00	IDR 16,807,013,738,097.70	IDR 20,377,192,082,894.60	IDR 24,664,950,566,859.70
Terminal value						IDR 297,823,953,491,837.00
Discount factor (WACC)	13.10%					
Perpetuity growth	4.45%					
PV FCF		IDR 9,358,239,120,279.88	IDR 10,733,470,352,966.70	IDR 11,617,154,527,802.40	IDR 12,453,457,821,909.00	IDR 13,327,916,648,284.40
PV of terminal value		IDR 263,327,386,084,302.00	IDR 232,826,511,934,311.00	IDR 205,858,515,005,134.00	IDR 182,014,186,649,308.00	IDR 160,931,716,333,341.00
Total PV of free cash flow		IDR 218,421,954,804,583.00				

Based on the table above, the value of PT Adaro Energy Tbk using Discounted Cash Flow for pessimistic scenario is **IDR 218,421,954,804,583.00**

3) *Optimistic Scenario*

TABLE VII Discounted Cash Flow for Optimistic Scenario

(optimistic)		CAGR	36.00%			
	2011	2012	2013	2014	2015	2016
Operating Income	IDR 12,145,826,938,230.70	IDR 16,518,324,635,993.80	IDR 22,464,921,504,951.50	IDR 30,552,293,246,734.10	IDR 41,551,118,815,558.40	IDR 56,509,521,589,159.40
Tax	IDR 3,036,456,734,557.68	IDR 4,129,581,158,998.45	IDR 5,616,230,376,237.88	IDR 7,638,073,311,683.52	IDR 10,387,779,703,889.60	IDR 14,127,380,397,289.80
NOPAT	IDR 9,109,370,203,673.04	IDR 12,388,743,476,995.30	IDR 16,848,691,128,713.70	IDR 22,914,219,935,050.60	IDR 31,163,339,111,668.80	IDR 42,382,141,191,869.50
Depreciation & Amortization	IDR 1,251,949,271,905.92	IDR 1,702,651,009,792.05	IDR 2,315,605,373,317.19	IDR 3,149,223,307,711.38	IDR 4,282,943,698,487.47	IDR 5,824,803,429,942.96
Operating cash flow	IDR 10,361,319,475,579.00	IDR 14,091,394,486,787.40	IDR 19,164,296,502,030.80	IDR 26,063,443,242,761.90	IDR 35,446,282,810,156.20	IDR 48,206,944,621,812.50
Less: Change in net work capital	IDR 501,939,814,734.40	IDR 1,765,675,990,416.84	IDR 2,401,319,346,966.90	IDR 3,265,794,311,875.00	IDR 4,441,480,264,149.99	IDR 6,040,413,159,243.99
Capital expenditure	IDR 4,395,363,329,696.64	IDR 1,582,330,798,690.79	IDR 569,639,087,528.68	IDR 205,070,071,510.33	IDR 73,825,225,743.72	IDR 26,577,081,267.74
Free cash flow	IDR 5,464,016,331,147.92	IDR 10,743,387,697,679.80	IDR 16,193,338,067,535.30	IDR 22,592,578,859,376.60	IDR 30,930,977,320,262.50	IDR 42,139,954,381,300.70
Terminal value						IDR 508,830,852,094,529.00
Discount factor (WACC)	13.10%					
Perpetuity growth	4.45%					
PV FCF		IDR 9,498,994,848,974.76	IDR 12,659,285,375,246.60	IDR 15,616,187,615,530.80	IDR 18,903,370,978,755.40	IDR 22,770,684,175,265.00
PV of terminal		IDR 449,893,625,	IDR 397,783,022,	IDR 351,708,324	IDR 310,970,399	IDR 274,951,095,

value		647,451.00	717,747.00	,239,433.00	,124,054.00	742,450.00
Total PV of free cash flow		IDR 354,399,618,736,223.00				

Based on the table above. the value of PT Adaro Energy Tbk using Discounted Cash Flow for optimistic scenario is IDR 354,399,618,736,223.00

Conclusion and Recommendation

From the data analysis that had been done. author conclude that PT Adaro Energy Tbk had been doing a good performance. seen from the revenues that it generates. which are always increased from 2006 until 2011. This company had been increasing revenue growth over 300%. This number represent the condition of PT Adaro Energy Tbk. which is in excellent condition and had been evolve very good from many aspects. In estimating the value of PT

Adaro Energy. author used three approaches. which are income approach (Discounted Cash Flow approach). asset based approach and market approach. All these three approach gives different estimated value depends on what it measure to determine the company value. From the calculation that had been done by author. the estimated value of PT Adaro Energy Tbk is ranged from IDR 43,361,609,266,373.00 to IDR 354,399,618,736,223.00. This means that this company has a big potency to enhance their value.

Below is the table of estimated value and share price of PT Adaro Energy Tbk:

TABLE VIII. Estimated Value and Share Price of PT Adaro Energy Tbk

No.	Methods	Estimate Value	Estimate Share Price	Information
1	Asset Based Approach	IDR 53,548,078,724,275.00	IDR972.91	-
2	Market Approach	IDR 58,877,751,377,352.00	IDR 1,119.63	P/E ratio Sector
		IDR 43,361,609,266,373.00	IDR 634.54	P/E ratio Company
3	Discounted Cash Flow Approach	IDR 302,897,527,843,632.00	IDR 8,768.50	Most Likely
		IDR 218,421,954,804.00	IDR 6,127.48	Pessimistic
		IDR 354,399,618,736,223.00	IDR 10,378.65	Optimistic

Based on the research that author have been done. PT Adaro Energy Tbk had already has a good performance by looking at the financial statement from year to year. This company value though still be able to be enhanced. These are several recommendation from the author that might help PT Adaro Energy Tbk enhancing its value:

1. The company should increase the free cash flow and decrease the cost of capital (WACC). In other words. the company should generate more income and decrease the operating cost and expenses.
2. The company could lower the WACC by paying off loans early with preferred stock. However. this could only be done if the

loans have higher rates than the preferred stock. otherwise this will raise the WACC.

3. Optimalized the domestic sales with domestic related parties since there is a new policy from the government that will raise the export taxes for several commodities. including coal. Therefore. domestic sales should be in higher priority for PT Adaro Energy Tbk.
4. PT Adaro Energy Tbk should reduce the expenses that generates small amount of revenues amd no growth. Therefore. it operating income could be increasing.
5. The company should increase the future growth and maintain the high growth period.

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