

## **FINANCIAL PERFORMANCE ASSESSMENT OF PT BUMI RESOURCES TBK IN COMPARISON WITH OTHER COAL MINING COMPANIES AND ESTIMATING THE COMPANY VALUE.**

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**Abstract-** *In the latter half of 2009 until the beginning of 2011, Indonesian coal mining industry experiences an escalation as the increase of global coal mining prices. However from the year 2011 to 2013, coal price is declining. This condition caused by the oversupply of global coal productions. PT Bumi Resources Tbk (BUMI), one of the local mining companies has experienced a downward in the stock price and uncertainties regarding its future prospect in the long run. This caused by the coal price that significantly decline. From the explanation above, author would like to analyze the company performance and make a comparison with the other local coal mining companies using several methods which are trend analysis, cross-section analysis, common-size financial statement analysis, and DuPont system of analysis. The benchmarking companies are the listed coal mining companies in Indonesia Stock Exchange. From the analysis that has been conducted, the financial performance of PT Bumi Resources Tbk is below the other benchmarking companies caused by several financial issues. Therefore, PT Bumi Resources require improvements to its financial performance to compete with the other coal mining companies. Based on income approach valuation, it indicates that PT Bumi Resources has experienced undervalue. It indicates that PT Bumi Resources Tbk has an opportunity to increase its value. Suggestions that can be given to PT Bumi Resources Tbk are effectively manage the level of debt, to be more effective in using its capital, and consider the cost and operating efficiency in order to improve the financial performance and compete better with the other coal mining companies.*

*Key words:* BUMI, financial performance, ratio, valuation

### **Introduction**

In the latter half of 2009 until the beginning of 2011, Indonesian coal mining industry experiences an escalation as the increase of global coal mining prices. However from the year 2011 to 2013, coal price is declining. This condition caused by the oversupply of global coal productions. PT Bumi Resources Tbk, one of the local coal mining companies had experienced a downward in the stock price and uncertainties regarding its future prospect in the long run. In the end of year 2013, the company experienced loss of \$660 million. The loss was caused by the low price of coal mining that perched below \$70 per ton, which is not able to cover the loss. At the month of June 2014, PT Bumi Resources Tbk (BUMI) stock price decrease to Rp. 175,- per share. The main objectives of this research is to analyze and assess the the performance of PT Bumi Resources Tbk using several methods of financial performances analysis in comparison with other local coal mining companies, then to know the company value of PT Bumi Resources Tbk is using valuation method. After all the analysis completed, author will make the conclusion regarding the financial performance of PT Bumi Resources compare to the other benchmarking companies and obtain the firm's value, then give an appropriate recommendations for management of PT Bumi Resources Tbk in order to improve the financial performance in the future.

## Literature Review

### Financial Statement Analysis

Financial statement analysis is a study to understand the risk and profitability of a company through analyze reported annual report and financial statements. Based on Gitman (2006), the four key of financial statement are income statement, balance sheet, the statement of shareholder's equity, and the statement of cash flows. Financial statement analysis is a way to evaluate a financial report with various ratios including profitability ratios, debt ratios, liquidity ratios, and market ratios. Financial statement analysis can provides information for investors about deciding on investing their funds in a particular company. In Addition, financial statement analysis is a method to determining the past, current, and future prospect of a company's performance or a specific time period.

### Financial Ratios

Based on Ehsan Nikbakht (2000), financial ratio is relative magnitude of two selected numerical values taken from company's financial statement. There are many standards ratios used to try to evaluate the overall financial condition of a corporation or organization. Financial ratios may be used by managers of the firm, shareholders, and firm's creditors. According to Lawrence J. Gitman (2006), ratio analysis includes methods of calculating and interpreting financial ratios to analyze and monitor the firm's performance from period to period. Financial ratio analysis allows comparison across companies within the same industry to analyze trends and firm's financial to other companies. When comparing financial ratios, the companies should be comparable in terms of having similar characteristics.

### Coumpund Annual Growth Rate

Compound Annual Growth Rate (CAGR) is often used to calculate the growth rate each year. CAGR indicates the growth performance of a firm. The calculation is expressed as follows:

$$CAGR(t_0, t_n) = \left( \frac{V(t_n)}{V(t_0)} \right)^{\frac{1}{t_n - t_0}} - 1$$

Equation 1: CAGR

### Liquidity Ratio

#### Current Ratio

The current ratio measures the firm's ability to fulfill its short-term obligations. A higher current ratio shows a greater degree of liquidity.

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liability}}$$

Equation 2: Current Ratio

#### Quick Ratio

The quick ratio is similar to current ratio, it excludes inventory by dividing the firm's current assets minus inventory by its current liabilities. The quick ratio indicates a better measure of overall liquidity when a firm's inventory cannot be easily converted into cash.

$$\text{Quick ratio} = \frac{\text{Current assets} - \text{Inventory}}{\text{Current liabilities}}$$

Equation 3: Quick Ratio

## Activity Ratios

### Inventory Turnover

Inventory turnover measures the activity, or liquidity, of a firm's inventory. The result of turnover is meaningful only when comparing with other firm within the same industry or to the firm's past inventory turnover. The inventory turnover is calculated as follows:

$$\text{Inventory turnover} = \frac{\text{Cost of goods sold}}{\text{Inventory}}$$

Equation 4: Inventory Turnover

### Average Collection Period

The average collection period measure the average amount of time needed to collect accounts receivable.

$$\text{Average collection period} = \frac{\text{Account receivable}}{\left( \frac{\text{Annual sales}}{365} \right)}$$

Equation 5: Average Collection Period

### Total Asset Turnover

The total asset turnover determine a firm's efficiency to uses its asset to generate sales or revenue. The higher the total asset turnover, the more efficient of firm's asset have been used.

$$\text{Total asset turnover} = \frac{\text{Sales}}{\text{Total Assets}}$$

Equation 6: Total Asset Turnover

## Debt Ratios

### Debt to Asset Ratio

The debt ratio determines the proportion of total assets financed by the firm's creditors. The higher this ratio, the firm's degree indebtedness and financial degree are greater.

$$\text{Debt ratio} = \frac{\text{Total Liabilities}}{\text{Total Assets}}$$

Equation 7: Debt Ratio

## Profitability

### Gross Profit Margin

Gross profit margin determines the percentage of the remaining cash after the firm has paid for its cost of goods sold.

$$\text{Gross Profit Margin} = \frac{\text{Sales} - \text{Cost of goods sold}}{\text{Sales}}$$

Equation 8: Gross Profit Margin

### Operating Profit Margin

Operating profit margin determines the percentage of the remaining cash after all cost and expenses except interest, taxes, and preferred stock dividend are deducted. This only measure the profits earned on operations and not including interest, taxes, and preferred stock dividend.

$$\text{Operating profit margin} = \frac{\text{Operating profits}}{\text{Sales}}$$

Equation 9: Operating Profit Margin

### Net Profit Margin

Net profit margin determines the percentage of the remaining cash after all cost and expenses including interest, taxes, and preferred stock dividend are deducted.

$$\text{Net profit margin} = \frac{\text{Net profit}}{\text{Sales}}$$

Equation 10: Net Profit Margin

### Earnings per Share (EPS)

Earnings per share indicate the firm's profit during the period to each outstanding share of common stock.

$$\text{Earnings per share} = \frac{\text{Net profit}}{\text{Number of Shares outstanding}}$$

Equation 11: Earning per Share

### Return on Assets (ROA)

Return on assets (ROA), or return on investment (ROI) indicates the firm's effectiveness to manage their assets to generate profit.

$$\text{Return on assets} = \frac{\text{Net profit}}{\text{Total assets}}$$

Equation 12: Return on Assets

### Return on Equity (ROE)

Return on equity determines the return earned of a firm on the common stockholders' equity.

$$\text{Return on equity} = \frac{\text{Net profit}}{\text{Total equity}}$$

Equation 13: Return on Equity

### Market Ratios

#### Price per Earning (P/E) Ratio

The P/E ratio measures the amount of money of a firm's earning that an investors are willing to pay. The higher the P/E ratio gives a higher degree of confidence the investors have to the firm's future performance.

$$\text{Price per earnings ratio} = \frac{\text{Market price per share}}{\text{Earnings per share}}$$

Equation 14: P/E Ratio

#### Market per Book (M/B) Ratio

The market/book ratio gives an assessment of how investors to see the firm's performance. It relates the market value of the firm's shares to their book value.

$$\text{Book value per share of common stock} = \frac{\text{Common stock equity}}{\text{Number of shares of common stock outstanding}}$$

Equation 15: Book Value

After finding the book value per share of common stock, the formula for the market/book ratio is

$$= \frac{\text{Market price per share of common stock}}{\text{Book value per share of common stock}}$$

Equation 16: M/B Ratio

### Common-size Financial Statement

The common-size financial statement is used for the comparison between two or more different firms. Usually used to decision-making purpose, if investors are desired to compare the financial statements of some companies, it has to be a scale to overcome the limitations of the comparison and relate the business for investment purposes. The scale that used is percentage form. By using this scale, it is easy to compare the financial statement of the different companies or different period.

### DuPont System of Analysis

According Gitman (2006), The DuPont system of analysis is used to measures the firm's financial statements and to assess its financial condition. The DuPont system of analysis merges the income statement and balance sheet into summary measures of profitability, return on total assets (ROA) and return on common equity (ROE). The DuPont System gathers the net profit margin, which measures the firm's profitability on sales, with its total assets turnover, which indicates how efficient the firm has used its assets to generate sales. The modified DuPont formula consist of return on assets (ROA) and return on equity (ROE), it is calculated as follows:

$$ROA = \frac{\text{Net income}}{\text{Net sales}} \times \frac{\text{Net sales}}{\text{Total assets}} \times 100\%$$

Equation 17: ROA DuPont System

$$ROE = \frac{\text{Net income}}{\text{Net sales}} \times \frac{\text{Net sales}}{\text{Total assets}} \times \frac{\text{Total asset}}{\text{Total equity}} \times 100\%$$

Equation 18: ROE DuPont System

### Pro Forma Financial Statement

The pro forma financial statement is a tool to provide projection of income statement and balance sheets. Two inputs are required in order to prepare pro forma financial statement which is financial statement for the preceding year and the sales forecast for the coming year. The pro forma income statement is used to forecast sales and describe the various income statement types as percentages of projected sales, while the pro forma balance sheet involves estimating all balance sheet accounts as a strict percentage of sales.

### Valuation

According to Gitman (2006), valuation is the process to link the risk and return in order to determine the worth of an assets. Valuation also can be applied to expected streams of benefit of bonds, stocks, income, and so on. To determine of an asset's wroth at a particular time, it uses time value of money analysis.

### Asset-Based Method

Asset-based valuation is an approach to estimate the assets owned by a firm that are worth currently. According to Reilly (2012) the asset-based method focused on a firm net assets value, obtained from subtracting the firm assets to its liabilities.

$$\text{Share Price} = \frac{(\text{Total assets value} - \text{Total liabilities})}{\text{Number of shares outstanding}}$$

Equation 19: Share Price Asset-based Method

### Market Approach

According to Reilly (2009), market approach valuation is often used because the indicator is the market itself that represents the real condition. Based on Damodaran (2000), the approach is using an industry average P/E ratio to value a firm. This indicates that the other firms in the same industry are comparable to the firm that being valued. To obtain the share price, the calculation is expressed as follows:

$$\text{Share Price} = \frac{\text{P/E ratio} \times \text{Net income}}{\text{Number of shares outstanding}}$$

Equation 20: Share Price Market Approach

### Discounted Cash Flow

According to Damodaran (2006), in a discounted cash flow model is considering the value of an asset to be the present value of the expected cash flow that generated by an assets. Discounted cash flow analysis elaborates the use of future free cash flow and discount the cash flow using the Weighted Average Cost of Capital (WACC) to obtain the present value, and it used to calculate the potential for investment.

$$P = \frac{CF_1}{(1+r)} + \frac{CF_2}{(1+r)^2} + \frac{CF_3}{(1+r)^3} + \dots + \frac{CF_{\infty}}{(1+r)^{\infty}}$$

Equation 21: Present Value of Free Cash Flow

### Free Cash Flow

Free cash flow represents the firm's cash flow available to investors, after the firm already met their operating needs and paid for net investments in current asset and fixed asset.

$$\text{FCF} = \text{EBIT} (1-T) + \text{Depreciation} - \text{Net Capital Spending} - \text{Change in Net Working Capital}$$

Equation 22: Free Cash Flow

### Operating Cash Flow

Operating cash flow is used to determine the amount of cash generated by firm's operation, from producing and selling its output of goods or service.

$$\text{Operating cash flow} = \text{EBIT} (1-T) + \text{Depreciation}$$

Equation 23: Operating Cash Flow

### Net Capital Expenditure

Net capital expenditure determines the difference between capital expenditures and depreciation.

$$\text{Net capital expenditure} = (\text{Ending} - \text{Beginning fixed assets}) + \text{Depreciation}$$

Equation 24: Net Capital Expenditure

### Change in Net Working Capital

Net working capital is the amount of the firm current assets exceeds its current liabilities.

$$\text{Change in Net Working Capital} = \text{Ending} - \text{Beginning} (\text{Current assets} - \text{Current Liabilities})$$

Equation 25: Change in Net Working Capital

### Weighted Average Cost of Capital

According to Gitman (2006), the weighted average cost of capital determines the expected average future cost of capital in the long run.

$$WACC = (W_d \times r_d) + (W_e \times K_e)$$

Equation 26: WACC

### Beta Coefficient

Beta coefficient is an index of the degree of movement of an assets return in response to a change in the market return.

$$\beta_a = \text{slope}(r_a, r_b)$$

Equation 27: Beta Coefficient

### Cost of Debt

Cost of debt determines the effective paid by a firm on its debts. Usually the cost of debt is calculated after tax returns.

After tax cost of debt = Average loans  $\times$  (1-T)

Equation 28: Cost of Debt

### Cost of Equity

Cost of equity is the return required on the stock by investors as compensation for the firm's nondiversifiable risk which measured by beta coefficient.

Cost of Equity =  $R_f + (\beta \times r_m)$

Equation 29: Cost of Equity

### Terminal Value

Terminal value is the worth of an investment in present value of all future cash flow by assuming in a stable rate of growth. Terminal value of a firm can be calculated beyond the time period of the discounted cash flow projection.

$$\text{Terminal value} = \frac{FCF (1+g)}{(WACC-g)}$$

Equation 30: Terminal Value

### Share Price

After obtaining the company value from discounted cash flow, it needs to calculate the share price to compare the current stock price in the market.

$$\text{Share Price} = \frac{\text{Company value} - \text{Total Non-current liabilities}}{\text{Number of shares outstanding}}$$

Equation 31: Share Price DCF

## Methodology

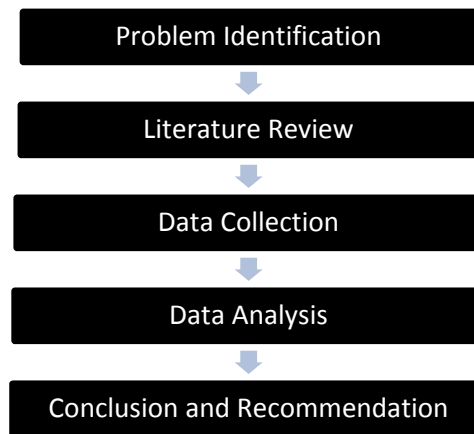


Figure 1.1 Research Design

Problem Identification: Explain the problem identification and research scope and limitation based

Literature Review: Explain the theoretical foundation of this research

Data Collection: The data gathering process that related with the main research topic

Data Analysis: The analyzed and calculated data as the core of this research

Conclusion and Recommendation: Shows the result of this research objective and conclude it to answer the entire research problem

## Trend Analysis

Table 4.1 Financial Ratio of PT Bumi Resources Tbk

PT Bumi Resources Tbk						
Financial Ratios		2009	2010	2011	2012	2013
Liquidity	Current Ratio	0.97	1.56	1.10	0.88	0.42
	Quick Ratio	0.88	1.48	1.04	0.78	0.38
Debt	Total Debt Ratio	0.78	0.75	0.84	0.95	1.04
	Times Interest Earned Ratio	3.53	1.74	1.70	0.69	0.35
Activity	Inventory Turnover	10.61	16.26	15.32	10.12	15.24
	Total Asset Turnover	0.43	0.50	0.54	0.51	0.51
	Average Collection Period (days)	85.48	164.39	51.80	32.85	50.02
Profitability	Gross Profit Margin	34.28%	37.20%	39.84%	26.41%	19.34%
	Operating Profit Margin	19.83%	25.14%	28.10%	11.35%	6.48%
	Net Profit Margin	8.81%	12.43%	5.38%	-18.69%	-18.61%
	Earnings per Share (EPS) in IDR	173.96	327.31	123.02	-403.56	-377.52
	Return on Assets (ROA)	3.83%	6.19%	2.92%	-9.59%	-9.42%
	Return on Equity (ROE)	19.28%	33.57%	18.28%	-179.94%	-217.89%
Market	P/E Ratio	17.64	11.70	22.37	-1.85	-1.01
	M/B Ratio	3.40	3.93	4.09	3.33	2.19



**Table 4.2 Financial Ratios of PT Adaro Energy Tbk**

PT Adaro Energy Tbk						
Financial Ratios		2009	2010	2011	2012	2013
Liquidity	Current Ratio	1.98	1.76	1.67	1.57	1.77
	Quick Ratio	1.95	1.71	1.95	1.71	1.60
Debt	Total Debt Ratio	0.59	0.54	0.59	0.54	0.57
	Times Interest Earned Ratio	10.84	6.46	10.72	7.07	4.58
Activity	Inventory Turnover	63.49	58.73	48.82	41.56	24.78
	Total Asset Turnover	0.63	0.61	0.70	0.56	0.49
	Average Collection Period (days)	39.06	36.60	43.13	46.22	34.39
Profitability	Gross Profit Margin	40.98%	31.32%	35.82%	28.01%	22.50%
	Operating Profit Margin	36.86%	27.44%	32.19%	22.47%	16.26%
	Net Profit Margin	16.39%	8.95%	13.85%	10.30%	6.86%
	Earnings per Share (EPS) in IDR	138.05466	69.089871	200.39778	139.12961	81.817821
	Return on Assets (ROA)	10.40%	5.44%	10.40%	5.44%	9.76%
	Return on Equity (ROE)	25.31%	11.90%	25.31%	11.90%	22.61%
Market	P/E Ratio	12.53	36.91	8.83	11.43	13.32
	M/B Ratio	3.17	4.39	2.00	1.46	0.94

**Table 4.3 Financial Ratios of PT Indo Tambangraya Megah Tbk**

PT Indo Tambangraya Megah Tbk						
Financial Ratios		2009	2010	2011	2012	2013
Liquidity	Current Ratio	1.98	1.83	2.34	2.22	1.99
	Quick Ratio	1.79	1.62	2.11	1.87	1.67
Debt	Total Debt Ratio	0.34	0.34	0.32	0.33	0.31
	Times Interest Earned Ratio	689.58	111.94	367.80	828.54	374.56
Activity	Inventory Turnover	14.45	15.97	13.93	11.25	13.81
	Total Asset Turnover	1.26	1.53	1.51	1.64	1.57
	Average Collection Period (days)	36.51	26.49	32.36	33.59	28.37
Profitability	Gross Profit Margin	37.82%	32.47%	37.45%	30.39%	23.37%
	Operating Profit Margin	28.89%	21.75%	29.68%	22.90%	15.49%
	Net Profit Margin	22.25%	12.24%	22.93%	17.71%	10.58%
	Earnings per Share (EPS) in IDR	3456.7017	2103.0755	5625.9545	4450.7206	2374.3468
	Return on Assets (ROA)	28.00%	18.73%	34.60%	28.97%	16.56%
	Return on Equity (ROE)	42.61%	28.31%	50.53%	43.10%	23.91%
Market	P/E Ratio	9.20	24.13	6.87	9.34	12.00

	M/B Ratio	3.93	6.85	3.48	4.03	2.88
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**Table 4.4 Financial Ratios of PT Bukit Asam (Persero) Tbk**

PT Bukit Asam (Persero) Tbk						
Financial Ratios		2009	2010	2011	2012	2013
Liquidity	Current Ratio	4.91	5.79	4.63	4.92	2.87
	Quick Ratio	4.62	5.42	4.30	4.49	2.47
Debt	Total Debt Ratio	0.28	0.26	0.29	0.33	0.35
Activity	Inventory Turnover	10.01	10.05	8.22	8.49	8.59
	Total Asset Turnover	1.11	0.91	0.92	0.91	0.96
	Average Collection Period (days)	60.84	46.02	40.71	48.66	46.49
Profitability	Gross Profit Margin	54.13%	46.15%	49.89%	43.89%	30.90%
	Operating Profit Margin	39.66%	29.13%	35.35%	30.99%	19.21%
	Net Profit Margin	30.50%	25.27%	29.18%	25.09%	16.54%
	Earnings per Share (EPS) in IDR	1184.5359	867.54454	1340.2306	1266.1141	835.09748
	Return on Assets (ROA)	33.78%	22.92%	26.84%	22.86%	15.88%
	Return on Equity (ROE)	47.87%	31.40%	37.82%	34.21%	24.55%
Market	P/E Ratio	14.56	26.45	12.95	11.93	12.21
	M/B Ratio	6.97	8.31	4.90	4.08	3.00

**Table 4.5 Financial Ratios of PT Bayan Resources Tbk**

PT Bayan Resources Tbk						
Financial Ratios		2009	2010	2011	2012	2013
Liquidity	Current Ratio	0.86	0.99	0.65	1.16	1.10
	Quick Ratio	0.59	0.78	0.42	0.68	0.75
Debt	Total Debt Ratio	0.66	0.64	0.55	0.63	0.71
	Times Interest Earned Ratio	3.07	10.03	19.29	3.73	1.34
Activity	Inventory Turnover	9.13	10.78	7.22	6.19	6.57
	Total Asset Turnover	1.08	1.04	0.92	0.75	0.73
	Average Collection Period (days)	26.42	27.05	18.72	22.65	20.10
Profitability	Gross Profit Margin	14.69%	23.36%	29.08%	18.18%	14.24%
	Operating Profit Margin	4.71%	14.95%	17.61%	8.42%	4.36%
	Net Profit Margin	2.01%	8.93%	14.15%	3.86%	-4.81%
	Earnings per Share (EPS) in IDR	46.860005	234.21572	561.96306	191.3801	-192.31742
	Return on Assets (ROA)	2.18%	9.33%	13.02%	2.88%	-3.52%
	Return on Equity (ROE)	6.47%	26.56%	29.13%	7.76%	-12.27%
Market	P/E Ratio	121	77	32	44	-44
	M/B Ratio	7.80	20.41	9.33	3.43	5.43

### **Liquidity**

BUMI shows a decrease in terms in liquidity, it reached the lowest point of current ratio in 2013 by 0.42. This means BUMI cannot meet their short term obligations. From year 2011 to year 2013 the figures are showing a decline on liquidity ratios, meaning BUMI does not have a good ability to cover their current liabilities. On the other hand, all other benchmarking companies show a stable performance except BYAN, it reflects that the other companies managed to maintain their current asset and decrease their short-term liabilities. PTBA show the highest liquidity ratio except in 2013 that decrease significantly. BYAN indicating a slight increase although in 2011 experienced a decline.

### **Debt**

In terms of debt, BUMI does not have good capability to manage the debt proportion. The debt ratio tends to be increasing throughout the years. It means that the value of debt ratio is getting worse each year. A high debt ratio indicates that BUMI has a large portion of debt compare to its assets, resulting in a higher risk in operation since BUMI will find that difficult to obtain loans for future business or project. It can be interpreted in year 2013 BUMI reached the highest point of their debt ratio which is 1.04. On the contrary, the other benchmarking companies indicating a low debt ratio. The best figures are shown by ITMG, who has the lowest debt ratio and the trend is also declining year to year. It means ITMG has managed their debt well enough and utilize assets to their operation activity. BYAN indicates a growth in the debt ratio, although their debt ratio is not as worse as BUMI.

### **Activity**

BUMI shows an average performance by looking at the activity ratios. BUMI activity ratios indicates a fluctuate growth throughout the year. By looking its inventory turnover ratio, it show a decrease in the year 2011, but BUMI managed to control its inventory level resulting an increase in 2013 which is 15.24. A higher value of inventory means a better performance and lower value shows inefficiency in controlling the inventory level. The highest number of inventory turnover ratios are shown by ADRO although it is experienced a decline year to year. As for the total asset turnover ratio, ITMG shows increasing trend and reach the highest level value of 1.64 in 2012. This condition indicates the efficiency of ITMG in using its assets to generate sales throughout the years. On the other hand, BUMI has shown the worst performance in terms of total assets turnover although the figure shows a stable growth. The average collection period of BUMI reached the highest level in 2010, but then showing a significant decrease in 2011. This condition caused by a decrease in receivables from USD 1,968,168,113 in 2011 to USD 567,806,739. The lowest number for this ratio is shown by BYAN, with the lowest point of 18.72 in 2011.

### **Profitability**

In terms of profitability, BUMI indicates a significant decrease from year 2011 to 2013. BUMI experienced net loss in the year 2012 and 2013 with net profit margin -18.69% and -18.61% respectively. This condition reflects by the decrease of coal price, from 132.5 \$/metric ton in January 2011 to 92.7 \$/metric ton in January 2013. In 2012, BUMI conducted revenues USD 4,000,990,515 and net income USD 214,967,174, whereas in 2013 conducted revenues of USD 3,775,518,192 and net loss USD 705,626,038. This condition reflects the sales which BUMI generated decreased and the escalation in cost of revenue, resulting a decrease in operating income and loss in net income. BUMI shows the worst performance compare to other companies, followed by BYAN which also experienced loss in 2013. The best figures are shown by ITMG and PTBA, which in overall in terms of profitability indicates stable performance in spite of the fact that the coal price were decreased.

## Market

For the market ratios in the year 2011 BUMI has shown a good performance on the P/E ratios, it has reached the highest point at 22.37. But in 2012 and 2013, BUMI shows a decline of P/E ratio due to the losses of net income. The P/E ratio reflects the company's current share price compared with its earnings per share. The higher value of P/E ratio indicates the higher investor's confidence since the investors are expecting a growth for their investment. In general, all the companies are experienced a decline in year 2011 due to the lower investor's confidence as the impact of the decline in coal prices. ADRO shows a less than 1 M/B ratio value in 2013, it means that the company has not been able to create value for its shareholders. The P/E ratio of BYAN shows a very large number, it could be interpreted that the company has a very small earnings compare to its share price.

## Growth Rate Comparison

**Table 4.6 CAGR Comparison**

Compound Annual Growth Rate					
Year 2009-2013	PT Bumi Resources Tbk	PT Adaro Energy Tbk	PT Indo Tambangraya Megah Tbk	PT Bukit Asam (Persero) Tbk	PT Bayan Resources Tbk
Net Sales	1.96%	7.20%	7.63%	4.61%	11.44%
Cost of Goods Sold	6.22%	13.20%	12.22%	13.54%	11.55%
Gross Profit	-9.07%	-4.91%	-2.24%	-6.49%	10.75%
Total Operating expense	-0.40%	12.62%	4.99%	-21.32%	11.21%
Operating income/profit	-18.46%	-8.98%	-4.99%	-9.51%	-9.51%
Profit before income tax	-182.02%	-10.71%	-6.80%	-8.13%	-185.08%
Income (expense) tax	-18.31%	-11.74%	-5.64%	-10.08%	32.65%
Net income	-186.81%	-9.43%	-7.24%	-7.43%	-185.31%

2


Based on the CAGR calculation, overall the growth rate indicates the numbers are negative. This condition reflects to the significant decline due to low coal price. The calculation of CAGR indicates BUMI has the lowest growth in terms of net sales. As for the cost of goods sold, overall the companies had shown an increasing trend over the year due to several causes like inflation and regulation of policies. In terms of operating income, net income before expense and tax, and net income, BUMI and BYAN indicates a significant decrease due to the net loss in 2013. The result of this growth comparison indicates that BUMI has the worst performance in managing their net sales and expenses, while ITMG and PTBA had the best performance compare to other companies although the growth is indicating a minus number.


## Cross-section Analysis

**Table 4.7 Cross-section Analysis Year 2013**

**Cross-section (Year 2013)**

Ratios	Industry Average	BUMI	ADRO	ITMG	PTBA	BYAN
Current Ratio	1.59	0.42	1.77	1.99	2.87	1.10
Quick Ratio	1.37	0.38	1.60	1.67	2.47	0.75
Inventory turnover	13.92	15.24	24.78	13.81	8.59	6.57
Total Asset Turnover	0.82	0.51	0.49	1.57	0.96	0.73
Average Payment Period (days)	n/a	40.82	36.33	27.75	15.37	61.72
Average Collection Period (days)	n/a	50.02	34.39	28.37	46.49	20.10
Debt Ratio	n/a	1.04	0.57	0.31	0.35	0.71
Times Interest Earned Ratio	21.87	0.35	4.58	374.56	n/a	1.34
Gross Profit Margin	26.73	19.34%	22.50%	23.37%	30.90%	14.24%
Operating Profit Margin	13.1	6.48%	32.19%	15.49%	19.21%	4.36%
Net Profit Margin	n/a	-18.61%	13.85%	10.58%	16.54%	-4.81%
Earnings per Share (EPS)	n/a	-IDR 377.52	IDR 81.82	IDR 2,374.35	IDR 835.10	-IDR 192.32
ROA	7.18	-9.42%	9.76%	16.56%	15.88%	-3.52%
ROE	13.73	-217.89%	22.61%	23.91%	24.55%	-12.27%
PE ratio	13.94	-1.01	13.32	12.00	12.21	-44.20
M/B ratio	n/a	2.19	0.94	2.88	3.00	5.43

 = Highest value compare to other company and industry average

 = Highest value compare to other company, lower than industry average

 = Lowest value compare to other company

Overall, the performance of coal mining sector on 2013 can still be the option for investor, in spite the fact that the coal price is still declining. BUMI shows the worse performance compare the other companies and industry average. It indicating that BUMI has a low profitability ratio due to the net loss in that period, and also indicating that BUMI has the highest debt ratio.

#### Common Size Financial Statement Analysis

For the common size income statement, BUMI and ADRO experienced a decrease of net sales due to low demand of coal, while the other companies are able to maintain their net sales. This will impact to the escalation of cost of goods sold. Overall, the cost of goods sold of the companies tends to increase due to the escalation of stripping, mining, and coal processing cost. PTBA has the lowest proportion of cost of goods sold, with the average of 55% for the past 5 years. All of the company's operating income, profit before income tax, and net income are declining from year the 2011 until 2013. It reached the highest net income at the year 2011. BUMI and BYAN indicates the lowest proportion of net income, because of the loss it is resulting a negative percentage by its net sales. In terms of common size balance sheet, total assets and total liabilities plus equity will be the comparison for the other balance sheet component. BUMI have high proportion of liabilities among the other companies followed by BYAN. In 2013 BUMI experienced a high amount of current liabilities due to the long-term liabilities that maturing in 2013.

#### 4.5 DuPont System of Analysis

Table 4.8 DuPont System of Analysis year 2009 to 2013

2009
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	<b>BUMI</b>	<b>ADRO</b>	<b>ITMG</b>	<b>PTBA</b>	<b>BYAN</b>
Net Profit Margin	8.81%	16.39%	22.25%	30.50%	2.01%
Total Asset Turnover	0.43	0.63	1.26	1.11	1.08
Equity Multiplier	0.204883721	0.26015873	0.176587302	0.274774775	0.018611111
<b>ROA</b>	<b>3.83%</b>	<b>10.4%</b>	<b>28%</b>	<b>33.78%</b>	<b>2.18%</b>
<b>ROE</b>	<b>19.28%</b>	<b>25.31%</b>	<b>42.61%</b>	<b>47.87%</b>	<b>6.47%</b>
<b>2010</b>					
	<b>BUMI</b>	<b>ADRO</b>	<b>ITMG</b>	<b>PTBA</b>	<b>BYAN</b>
Net Profit Margin	12.43%	8.95%	12.24%	25.27%	8.93%
Total Asset Turnover	0.5	0.61	1.53	0.91	1.04
Equity Multiplier	0.2486	0.14672131	0.08	0.277692308	0.085865385
<b>ROA</b>	<b>33.57%</b>	<b>5.44%</b>	<b>18.37%</b>	<b>22.92%</b>	<b>9.33%</b>
<b>ROE</b>	<b>2%</b>	<b>11.90%</b>	<b>28.31%</b>	<b>31.40%</b>	<b>25.56%</b>
<b>2011</b>					
	<b>BUMI</b>	<b>ADRO</b>	<b>ITMG</b>	<b>PTBA</b>	<b>BYAN</b>
Net Profit Margin	5.38%	13.85%	22.93%	29.18%	14.15%
Total Asset Turnover	0.54	0.7	1.51	0.92	0.92
Equity Multiplier	0.09962963	0.23414285	0.15185430	0.31717391	0.15380434
<b>ROA</b>	<b>2.92%</b>	<b>10.41%</b>	<b>34.60%</b>	<b>26.84%</b>	<b>13.02%</b>
<b>ROE</b>	<b>18.28%</b>	<b>25.31%</b>	<b>50.53%</b>	<b>37.82%</b>	<b>29.13%</b>
<b>2012</b>					
	<b>BUMI</b>	<b>ADRO</b>	<b>ITMG</b>	<b>PTBA</b>	<b>BYAN</b>
Net Profit Margin	-18.69%	10.30%	17.71%	25.09%	3.86%
Total Asset Turnover	0.51	0.56	1.64	0.91	0.75
Equity Multiplier	-0.36647058	0.15982142	0.10798780	0.27571428	0.05146666
<b>ROA</b>	<b>-9.59%</b>	<b>5.44%</b>	<b>28.97%</b>	<b>22.86%</b>	<b>2.88%</b>
<b>ROE</b>	<b>-179.94%</b>	<b>11.90%</b>	<b>43.10%</b>	<b>34.21%</b>	<b>7.76%</b>
<b>2013</b>					
	<b>BUMI</b>	<b>ADRO</b>	<b>ITMG</b>	<b>PTBA</b>	<b>BYAN</b>
Net Profit Margin	-18.61%	6.86%	10.58%	16.54%	-4.81%
Total Asset Turnover	0.51	0.49	1.57	0.96	0.73
Equity Multiplier	-0.36490196	0.28265306	0.06738853	0.17229166	-0.06589041
<b>ROA</b>	<b>-9.42%</b>	<b>9.76%</b>	<b>16.56%</b>	<b>15.88%</b>	<b>-3.52%</b>
<b>ROE</b>	<b>-217.89%</b>	<b>22.61%</b>	<b>23.91%</b>	<b>24.55%</b>	<b>-12.27%</b>

The operating efficiency of DuPont system is determined by the net profit margin. In terms of net profit margin, all of the company have the same trend to increase in 2011 except BUMI, and all the company's net profit margin were decreased in 2012 due to low price of coal. Only PTBA that can successfully managed its net profit margin to a stable growth, although the trends are declining in 2013. On the other hand, BUMI has suffered a net loss in 2012 and 2013 resulting a negative percentage of net profit margin. BYAN also experienced a net loss in 2013 resulting in a negative value of net profit margin, this cause by the high cost of revenue and high operating expenses. Based on DuPont system analysis, the asset-use efficiency is determined by the company's total asset turnover ratio. The figure shown all the company experienced an unstable growth of total assets turnover. BUMI and ADRO shows a low total assets turnover, both of the companies

cannot utilize its assets to generate sales. It can be caused by a bad inventory management, while ITMG and PTBA show a high value of total assets turnover. For the financial leverage of DuPont system analysis is determined by the calculation of equity multiplier, it can be calculated by dividing the total assets with total equity. All the companies faced an unstable growth during 2009 to 2013. The equity multiplier growth differences can be caused by reduction of total assets to pay the expenses, and the increase of total assets from the cash.

#### Asset-based Method

**Table 4.9 Asset-based Method of PT Bumi Resources Tbk**

PT Bumi Resources Tbk	
Current Asset	USD 1,994,236,777
Non-Current Asset	USD 5,009,671,338
Total Asset	USD 7,003,908,115
Current Liabilities	USD 4,719,914,333
Non-Current Liabilities	USD 2,586,953,317
Total Liabilities	USD 7,306,867,650
Company Value	USD 7,003,908,115
Share Price	IDR -173
Current Price	IDR 300

From the table above, the company value of BUMI is USD 7,003,908,115. The share price after divide the company value by the number of shares outstanding of 20,300,187,393 shares is IDR -173 while the share price in the end of year 2013 is IDR 300. From the calculation of asset-based method is resulting in a negative value and cannot be determined.

#### Market Approach Valuation

**Table 4.10 P/E Ratio of PT Bumi Resources Tbk**

PT. Bumi Resources Tbk.	
P/E Industry	13.94
Net Income	IDR (7,663,801,367,970)
Equity Value	IDR (106,833,391,069,502.00)
Share Outstanding	20,300,187,393
Share Price	IDR -5263
Current Price	IDR 300

From the table above, using the P/E ratio of the industry average in August 2014 amounting 13.94, the net income (loss) of the company is IDR -7,663,801,367,970 resulting on the equity value of the company in IDR -106,833,391,069,502. The share price after divided the equity value with the number of shares outstanding of 20,300,187,393 shares is IDR -5263.

From the calculation of market approach, the result is IDR -5263 which cannot be calculated since the value is negative while the share price in the end of year 2013 is IDR 300.

### Income Approach Valuation (DCF)

#### Beta Coefficient

Beta coefficient of BUMI is amounting 2.08 calculated from historical price of BUMI stock price (BUMI.JK) from July 2009 to August 2013.

#### Cost of Equity

Cost of Equity =  $R_f + (\beta \times r_m)$

$$= 9\% + (2.08 \times 9.1\%)$$

$$= 27.9\%$$

#### Cost of Debt

After tax cost of debt =  $26\% \times (1 - 25\%) = 20\%$

#### Equity Portion

$$\text{Equity Portion} = \frac{(302,959,535)}{2,586,953,317 + (302,959,535)} = -13\%$$

Since the equity is experienced a deficit, the equity portion for the WACC calculation is assumed 0%.

#### Debt Portion

$$\text{Debt portion} = \frac{2,586,953,317}{2,586,953,317 + (302,959,535)} = 113\%$$

Since the debt portion exceeds 100%, the debt portion for the WACC calculation is assumed 100%.

#### Weighted Average Cost of Capital

The calculation of weighted average cost of capital based on the previous calculations represented with the debt portion (Wd) amounting 100%, equity portion (We) amounting 0%, cost of debt (rd) amounting 19.5% and cost of equity (re) amounting X%. Therefore, the calculation of the weighted average cost of capital is:

$$\text{WACC} = 100\% \times 19.55 + 0\% \times 27.9\% = 20\%$$

#### Sales Projection

The sales projection will use the data from the income statement and balance sheet from PT Bumi Resources Tbk consolidated financial report. The calculation of compound annual growth rate (CAGR) will be used to the projection for 4 years ahead.

$$\text{CAGR} = \left( \frac{3,547,424,427}{3,219,274,206} \right)^{\frac{1}{4}} - 1 = 1.456\%$$

#### Pro Forma Financial Statement

The pro forma financial statement contains of pro forma income statement and pro forma balance sheet. Author will present the pro forma financial statement using the growth from the calculation of compound annual growth rate (CAGR).



## Estimating Value

**Table 4.11 Free cash flow of PT Bumi Resources Tbk**

Free cash flow of PT Bumi Resources Tbk	
Free Cash Flow Terminal Value	USD 1,773,793,787
WACC	20%
Perpetuity Growth	7.6%
Present Value of Terminal Value	USD 1,478,161,489
<b>Total Present Value of Free Cash Flow</b>	<b>USD 4,293,267,152</b>

**Table 4.12 Estimated Share Price of PT Bumi Resources Tbk**

Estimated Share Price of PT Bumi Resources Tbk	
Company Value	USD 4,239,267,152
Non-current Liabilities	USD 2,586,953,317
Number of Shares Outstanding	20,300,187,393
<b>Share Price</b>	<b>IDR 975</b>

Based on the calculation above, the weighted average cost of capital (WACC) is 20% and the perpetuity growth of 7.6%. The share value of BUMI at the beginning of 2013 is amounting to IDR 300, and the estimated share value from the calculation of income approach is resulting in IDR 975. It can be reflected that the share value of BUMI had experienced undervalue

## Conclusion

In the past 5 years, all of the company's performance is affected by the condition of the coal price. In year 2011, the coal price reached a high level resulting in high revenue and net income. However, in 2012 coal price is decline significantly and affecting all of the company revenues and net income. The net revenue and net income are decreased significantly from year 2011 to 2012, and continuously decreasing in 2013. PT Bumi Resources Tbk is experienced net loss in 2012 and 2013. PT Bayan Resources Tbk also experienced net loss in 2013. PT Bumi Resources Tbk indicates a poor performance among the other companies. Financial ratios that are used to measure all of the company show that PT Bumi Resources Tbk is less competitive than the other companies, particularly in net income that experienced loss in 2012 and 2013. This condition reflects by high level of liabilities at that time and also the declining of coal price resulting lower revenue and loss of net income. After determine the company's financial performance, valuation method is used to determine the estimated share value of PT Bumi Resources Tbk. The valuation methods consist of asset-based method, market approach, and income approach. Based on asset-based method, PT Bumi Resources Tbk represents the company value of USD 7,003,908,115 using the total assets of 2013. The share price of PT Bumi Resources is amounting IDR -173 with the exchange rate of IDR 11610 on July 17<sup>th</sup> 2014. The result of asset-based method generates a negative value since the total liabilities excess the total assets and the result cannot be determined. According to market approach, PT Bumi Resources Tbk represents the company value of USD -106,833,391,069,502 using the net income in year 2013 and P/E ratio of industry average amounting 13.94. The result is amounting IDR -5263 with the exchange rate of IDR 11610 on July 17<sup>th</sup> 2014. The market approach indicates a minus result which cannot be determined using this approach. Based on the income approach calculation, the total present value of free cash flow is USD 4,293,267,152. The company generates the share price of IDR 975 which has

higher value than the share price at the end of 2013 amounting of IDR 300. The share price of PT Bumi Resources Tbk has experienced undervalue. Based on the income approach valuation, the share value of PT Bumi Resources Tbk is amounting of IDR 975 whereas the share price at the end of 2013 is IDR 300. The share price has experienced undervalue which means PT Bumi Resources still have an opportunity to increase its share value although it has experienced loss.

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