

FINANCIAL PERFORMANCE ANALYSIS AND ITS CORRELATION WITH STOCK PRICE: A CASE STUDY OF INDONESIA LQ 45 COAL MINING COMPANIES

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ABSTRACT

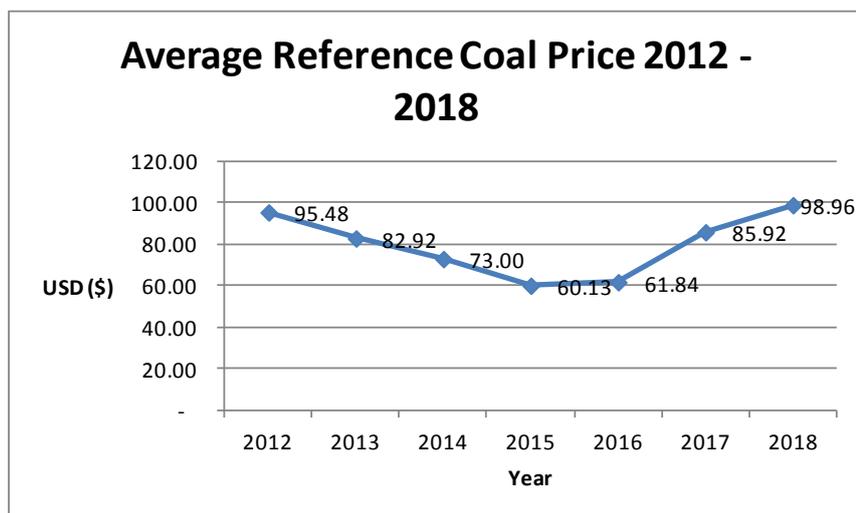
Economic crises in Europe, China and India gave impact to slow economic growth and impacted on the decline in coal prices. The impact caused by the reduction in coal consumption in China is the abundant stock of coal throughout the world, which has caused coal prices to decline starting from 2013. Fluctuating trends in coal prices have a direct impact on coal businesses. This can be reflected in the financial performance. The stock price is important and must be considered by investors. This study aims to analyze financial performances and its correlation with stock price of coal mining companies listed in LQ 45 of February within period 2014 – 2018 under the situation of volatile coal price. The method used in this study is calculation of financial ratios to analyze financial performance such as liquidity, profitability, solvability and activity. This study also determines the correlation between relationships financial ratios and stock prices. The correlation analysis of this study using PMCC method. Based on the results of the calculation of financial ratio analysis is all companies is in liquid condition and PT Adaro Energy is the most liquid company, all companies is profitable and PT Bukit Asam has the best profitability performance, all companies are solvable and PT ITM has a lower risk than other companies, and PT ITM is the most efficient in utilizing its resources. This study confirms that net profit margin of a company has the strongest correlation with stock price with average coefficient correlation was +0.836, while equity to total asset has the weakest with average coefficient correlation was +0.391. This study has added the knowledge in financial literature. It gives a strong insight for managers in coal mining industries about financial performance. The findings are important for investor to make decision in stock market transaction.

Keywords: coal mining, financial performance, financial ratios, stock price, coefficient correlation

INTRODUCTION

In era 2000, many new mining companies were established in Indonesia while existing mining companies increased investment to expand their production capacity. This results in a very large oversupply. While in 2012, there were economic crises in Europe, China and India which impacted on slowing economic growth and impacted on the decline in coal prices. China is the largest coal consumer in the world. Since 2013 coal consumption in China has continued to decrease. The impact caused by the reduction in coal consumption in China is the abundant stock of coal throughout the world, which has caused coal prices to decline starting from 2013. In 2016, global coal prices began to creep up. In 2017 to 2018, coal prices fluctuated, but with an upward trend.

Figure 1. Average Reference Coal Price 2012 – 2018



Source: The Ministry of Energy and Mineral Resources (ESDM)

Fluctuating trends in coal prices have a direct impact on coal businesses. This can be reflected in the financial performance of coal issuers on the Indonesia Stock Exchange. The improvement in world coal prices is a pillar of the performance of coal companies. The stock price is a very important factor and must be considered by investors in investing because the stock price shows the achievements of the issuer. The movement of stock prices is in line with the issuer's performance. LQ45 category stocks are attractive to investors because they have high liquidity and large market capitalization.

This below is a chart of LQ 45 coal mining companies stock price movements from January 2012 to December 2018. There are PT Adaro Energy, PT Bukit Asam and PT Indo Tambangraya Megah The stock price is tended to decline from 2013 and starting to increase in 2017.

Figure 2. LQ 45 Coal Mining Companies Stock Price from Mid 2012 – Dec 2018



Source: Yahoo Finance 2019

One instrument for investors to be a strong basis for reliable decision making is financial statements. From the financial statements, investors can make a comprehensive assessment of the company's performance. Improving the company's financial performance is important to generate large revenues through reaching more markets, attracting new investors, and maintaining the company's sustainability.

Based on the background of the above problems, it is necessary to carry out further studies related to financial performance analysis and how it relates to share prices in coal mining companies under volatile coal price conditions. How does the financial performances of coal mining companies listed in LQ 45 of February within period 2014 – 2018 under the situation of fluctuating coal prices. Furthermore, in this study we also want to know how the correlation or relationship between financial performance and changes in the stock price of their companies during that period. The core of this study aims to analyze financial performance and its correlation between financial performances with stock prices from LQ 45 mining coal companies on February 2019 within December 2014 - December 2018 with total of 3 companies.

PREVIOUS RESEARCH ON FINANCIAL PERFORMANCE

There are two methods to measure the financial performances which are accounting and market measurement. There are many researchers who prefer to use accounting measurement (Waddock and Graves 1997; Cochran and Wood 1984), rather than market measurement (Alexander and Buchholz, 1978; Vance, S. C., 1975), and some of them adopt both methods (McGuire, J. B., Sundgren, A., Schneeweis, T., 1988). There are few differences between accounting and market measurement method. In accounting, company use the historical aspects to measure their financial performance (McGuire, Schneeweis, & Hill, 1986) and it contain a bias which lead to managerial manipulation. According to Megaladevi (2015), financial ratio is a good evaluation method to measure the company performances. Wijaya and Yustina (2017) has conducted studies to determine the impact of financial ratio toward stock price: evidence from banking industries. The result was the dividend policy using dividend payout ratio and profitability ratio using return on asset ratio has significant correlation with stock price. Then, solvency ratio using debt to equity ratio and profitability using return on equity has in significant correlation with stock price.

RESEARCH MODEL

The core of this study is analyzing a company financial performance and calculating the correlation analysis between financial ratio and stock price of coal mining companies data from 2014 - 2018 listed in LQ45 index in Indonesia Stock Exchange per February 2019. The descriptive financial ratio is used to measure, describe and analyze the performance of coal mining companies then to calculate the correlation between financial ratio and stock price. The data used in this study are quantitative data in the form of corporate financial reports from 2014 to 2018. The source of data in this study is secondary data. Secondary data collection used in this study was obtained from the Indonesia Stock Exchange and the official website of the related company in the form of the company's financial statements which were the object of research for five years (2014-2018). This study use coal mining companies listed in LQ 45 Index per February 2019 because trading activities that occurred until December 2018 are reported in LQ 45 Index next year that reported on February 2019. Based on LQ 45 Index per February 2019, there are 3 (three) coal mining companies, namely PT Adaro Energy Tbk., PT Bukit Asam Tbk. and PT Indo Tambangraya Megah Tbk.

Correlation analysis is a method of statistical to measure the correlation between two variables. Correlations quantifies the extent of two variables, x and y associated to each other. This analysis measures how strong relationship between variable x and y. Pearson's correlation (also called Pearson's R) is a correlation coefficient commonly used in linear regression, Pearson Product Moment Correlation attempts to draw a line on its best fit between two data and inform how far the data with the line. For two numerical data researchers should use Pearson's product moment correlation coefficient (PMCC). The reason author use Pearson

Product Moment Correlation in this study is because the correlation between two data is linear and data is quantities (financial ratio). For the purpose of this study, the correlation coefficient levels are defined in table below.

Table 1. Level of Correlation Coefficient

| r value | Level of correlation |
|-------------------|----------------------------------|
| r = -1 | Perfect negative correlation |
| -1 < r ≤ -0.80 | Very strong negative correlation |
| -0.80 < r ≤ -0.60 | Strong negative correlation |
| -0.60 < r ≤ -0.40 | Moderate negative correlation |
| -0.40 < r ≤ -0.20 | Weak negative correlation |
| -0.20 < r ≤ -0.01 | Very weak negative correlation |
| r = 0 | No linear correlation |
| 0 < r ≤ 0.20 | Very weak positive correlation |
| 0.20 < r ≤ 0.40 | Weak positive correlation |
| 0.40 < r ≤ 0.60 | Moderate positive correlation |
| 0.60 < r ≤ 0.80 | Strong positive correlation |
| 0.80 < r ≤ 1 | Very strong positive correlation |
| r = 1 | Perfect positive correlation |

According to Levine (2008), coefficient correlation (r) can be represented as below equation:

$$r = \frac{\sum_{i=1}^n (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_{i=1}^n (x_i - \bar{x})^2 \sum_{i=1}^n (y_i - \bar{y})^2}}$$

Where:

- I = Initial year
- N = Target year
- X_i = Independent variable, in this study is financial ratio
- \bar{x} = Average financial ratio
- y_i = Dependent variable, in this study is stock price
- \bar{y} = Average stock price

A. Coal Mining Industries in Indonesia

Since 2005, coal production in Indonesia has experienced a massive increase, that it overtakes Australia. Indonesia is in second place with a production of around 323.3 million ton of oil equivalent. This was reported in the 2019 BP Statistical Review of World Energy.

Table 2. Largest Coal Producing Country 2018

| Million tones oil equivalent | 2018 |
|------------------------------|--------|
| China | 1828.8 |
| Indonesia | 323.3 |
| India | 308 |
| Australia | 301.1 |
| Mongolia | 34.4 |
| Vietnam | 23.3 |
| Thailand | 3.8 |
| New Zealand | 1.9 |
| Pakistan | 1.7 |
| Japan | 0.6 |
| South Korea | 0.6 |

Source: BP Statistical Review of World Energy 2019

Coal is one of the commodities that have contributed to the nation's economy. The global economy greatly affects the income of this sector, especially coal demand from the largest market shares (China, India and Japan). The contribution of the coal sector to

the Indonesian GDP began to decline since 2014, amounting to 2.46% from 2.96% in 2013. This condition continues to decline in 2015 it was 2% and in 2016 it dropped to 1.87%. In 2017 it began to increase to 2.38% and in 2018 amounted to 2.70%.

Figure 3. Coal Mining Contribution to Indonesia’s GDP



Source : Badan Pusat Statistik 2019

The Ministry of Energy and Mineral Resources (ESDM) set a HBA for the December 2013 period of US \$ 80.31 per ton. The average of HBA in this year reached US \$ 82.92 per ton. One of the causes of the drop in coal prices is because of the large number of mining business permits (IUP) issued by the government. As a result, supply has increased and prices have plummeted. In addition, illegal coal mining also took place throughout 2013. There was 56 million tons of illegal coal produced during 2013.

B. Financial Statement Analysis

Financial statement analysis is the process of evaluating the elements/ items in financial statement in order to decision making. Financial statement analysis will provide information to evaluate the company's financial performance during a certain period and trends that can give consideration to the company's success in the future. Financial ratios analysis is one of the financial statement analysis technique/ tool that is often done by companies. Financial ratios can be used to identify a company’s specific strength and weaknesses as well as providing detailed information about company profitability, liquidity, activity and solvency (Hempel et al, 1994: Dietrich, 1996). According to Martono and Agus (2007) financial ratios are divided into four categories such as profitability ratios, activity ratios, liquidity ratios, and solvency ratios.

C. Liquidity Ratios

According to Harahap (2010), liquidity ratio is a ratio that describes the ability of a company to settle its short-term obligations. This ratio compares short-term liabilities with short-term resources or current assets available to meet these short-term obligations.

Cash ratio measures the liquidity of the company to pay the current liabilities with only cash and cash equivalents. If the company has cash ratio equal to one, it indicate that company has the same amount of cash and its debt. If the value of cash ratio is more than 1, it indicates that company has more cash to pay its debt. However, if the value is less than 1, it indicates that company has less cash to pay its debt.

$$\text{Cash Ratio} = (\text{Cash} + \text{Cash Equivalents} / \text{Current Liabilities}) \times 100\%$$

The current ratio measures the company ability to pay its short-term liabilities using their short-term assets, or current asset. If the value of cash ratio is more than 1, it indicates that company has more cash to pay its debt. Company should not face any liquidity problem. If the company has a current ratio below one, it indicates that company has a problem with its short-term debt.

$$\text{Current Ratio} = (\text{Current Asset} / \text{Current Liabilities}) \times 100\%$$

Quick ratio measures the ability of a company to pay its short-term debt with its liquid current assets. This ratio assesses the company's ability to pay short-term liabilities using current assets or without calculating inventory because inventory will take longer to cash than other assets.

$$\text{Quick Ratio} = (\text{Current Assets} - \text{Inventory} / \text{Current Liabilities}) \times 100\%$$

D. Profitability Ratios

Profitability ratio is the ratio used to measure a company's ability to produce profits depends on sales, assets and capital share (Anthony, 2011). The profitability is the most common measure for company's financial performance.

ROA measures the efficiency of operating management by utilizing its total assets to generate income. This ratio is important for company management to evaluate and assess the effectiveness and efficiency of company management in managing all company assets. The higher the firm's return on total assets, the better. The greater the ratio, the more favored by investors because it shows companies can effectively manage their assets into profits.

$$\text{Return on Asset (ROA)} = (\text{Net Income} / \text{Total Assets}) \times 100\%$$

Return equity ratio is the ability of a company to get profit from shareholder investment. ROE measures how efficiently a company can use the money from shareholders to generate profits and grow the company (Anthony, 2011). According to Daryanto (2017:6), return on equity is an important ratio for investors to consider its profits. This ratio can be used as an indicator of how effective management uses equity financing to fund operational activities of a company.

$$\text{Return on Equity (ROE)} = (\text{Net Income} / \text{Total Shareholder's Equity}) \times 100\%$$

The gross profit margin measures the percentage of each sales dollar remaining after the firm has paid for its goods. It is a measure of the efficiency of a company using its raw material and labor during the production process. The higher the gross profit margin, the better because it means that the lower the relative cost of merchandise sold.

$$\text{Gross Profit Margin} = (\text{Gross Profit} / \text{Total Revenue}) \times 100\%$$

The net profit margin measures the percentage of each sales dollar remaining after all costs and expenses, including interest, taxes, and preferred stock dividends, have been deducted. The net profit margin is a commonly cited measure of the firm's success with respect to earnings on sales. The higher the firm's net profit margin, the better.

$$\text{Net Profit Margin} = (\text{Net Income} / \text{Total Revenue}) \times 100\%$$

E. Solvency Ratios

Solvability ratio is used to measure company's ability to meet its debt and other obligations. The solvency ratio indicates whether a company's cash flow is sufficient to meet its short-and long-term liabilities.

Debt to Equity ratio is the ratio of total liabilities of a company to its shareholders' equity. This ratio measure how much capital is used as collateral for company debt. This ratio shows the ability of own capital to fulfill all of its obligations if the company is liquidated. If the DER value of a company is 1 that means every 1 dollar of assets, the creditors and investors have 0.5 cent dollars each.

$$\text{Debt to Equity Ratio} = (\text{Total Liabilities} / \text{Shareholder's Equity}) \times 100\%$$

Debt-to-assets ratio measures the proportion of total assets financed by the company's creditors. Debt ratio is a measure of a financial risk, the risk that the company's total assets may not be sufficient to pay off its debts and interest. A company is said to be solvable if the company has sufficient assets to repay all of its debts while if the company does not have enough assets to pay all of its debts upon liquidation then the company is said to be insolvable.

$$\text{Debt to Total Asset} = (\text{Short Term Debt} + \text{Long Term Debt} / \text{Total Asset}) \times 100\%$$

Equity to asset ratio measures the percentage of company's asset owned by investors and the leverage level of the company with its debt. This ratio is similar to debt to equity ratio. If the company has less value, it indicates that company funding its asset inefficiently.

$$\text{Total Equity to Total Asset} = (\text{Total Equity} / \text{Total Asset}) \times 100\%$$

F. Activity Ratios

Activity ratio measures a business ability to convert its asset into cash (Avenir, 2018). Activity ratios assess the efficiency of operation of company. This Activity Ratio or Efficiency Ratio measures the ability of a business to convert various types of non-cash assets or assets into cash.

Total Asset Turnover Ratio

Asset Turnover measures the value of a company's sales or revenues relative to the value of its assets. This total asset turnover ratio is a measure of a company's ability to generate sales from its total assets by comparing net sales with total assets.

$$\text{Total Asset Turnover Ratio} = (\text{Revenue} / \text{Total Asset}) \times 100\%$$

According to Daryanto (2018), inventory measures how many times the inventory is being sold of a certain period of time. Inventory turnover ratio is used to assess how efficiently a business is managing its inventories. In general, a high inventory turnover indicates efficient operations.

$$\text{Inventory Turnover Ratio} = (\text{Cost of Goods Sold} / \text{Inventory}) \times 100\%$$

The average collection period, or average age of accounts receivable, is useful in evaluating credit and collection policies (Gitman, 2015). It also represents the number of days customer had to pay their receivables.

$$\text{Average Collection Period} = \text{Account Receivable} / (\text{Annual Sales} / 365)$$

Fixed assets turnover ratio is ratio which measures how efficiently a company is generating revenues using its fixed assets. This ratio evaluates the company's ability to use its assets effectively so that revenue increases. The higher the value of this ratio means the more efficient fixed assets are used to get a lot of sales from the use of fixed assets.

$$\text{Fixed Asset Turnover Ratio} = (\text{Revenue} / \text{Net Fixed Assets}) \times 100\%$$

RESULT AND DISCUSSION

A. Liquidity Analysis

Figure 4. Liquidity Performance of PT Bukit Asam (2014 – 2018)

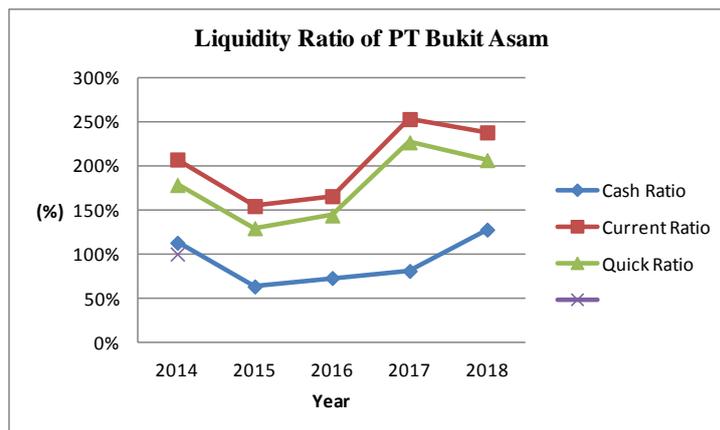


Figure 4 showed liquidity ratio (cash ratio, current ratio and quick ratio) of PT Bukit Asam (PTBA) from 2014 – 2018. PTBA cash ratio were 113%, 63%, 73%, 81% and 128% respectively from 2014 – 2018. In 2015, cash ratio decrease to 63% from 113% that was due to significant decrease in cash and cash equivalents was 22.87% and followed by a significant increase in current liabilities was 37.47%. This increase in current liabilities was mainly due to increased trade payables.. In 2018, cash ratio increased that was due to increase in cash and cash equivalent was 77.23%. The increase of cash and cash equivalent is mostly get from cash flow from operational in 2018 was IDR 7,867 billion.

PTBA current ratio was 207%, 154%, 166%, 253% and 238% respectively from 2014 – 2018. In 2015, current ratio decrease to 154% from 207% that was due to significant increase in current liabilities was 37.47% and followed by increasing in current asset was only 2.45%. In 2017, current ratio significant increase, growth of current asset was 33.1% and followed by decrease in current liabilities was 12.81%. But in 2018, current ratio decrease because current asset increase was 6% mainly caused by decrease in account receivable by 47.95% and followed by increase in current liabilities was 12%.

PTBA quick ratio was 178%, 129%, 144%, 227% and 206% respectively from 2014 – 2018. In 2015 quick ratio decreased to 129% from 178% that was due to significant increase in current liabilities was 37.47% and increase in inventory was 19.34%. In 2016, quick ratio increased that was due to decrease in inventory was 10.61%. In 2017, quick ratio significant increases that was due to significant increases in account receivable by 133.85% and decrease in current liabilities was 12.81%. In 2018, quick ratio decrease that was due to increase in inventory was 34.18% and increase in current liabilities was 12.26%. Overall, the results of PTBA's liquidity ratio show that PTBA has sufficient ability to pay off all of its short-term obligations.

Figure 5. Liquidity Performance of PT ITM (2014 – 2018)

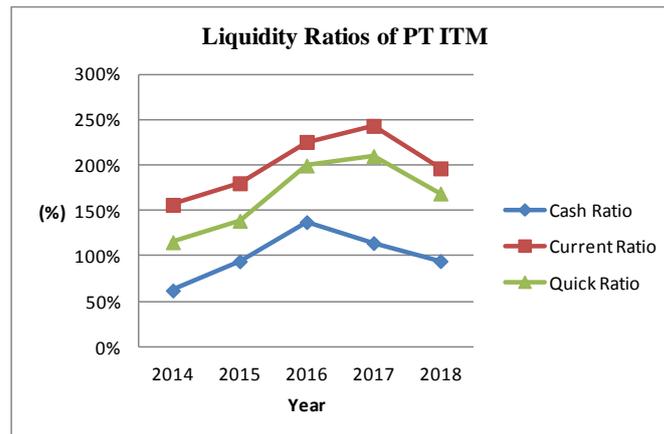


Figure 5 showed liquidity ratio (cash ratio, current ratio and quick ratio) of Indo Tambangraya Megah Tbk (ITM) from 2014 – 2018. ITM cash ratio were 62%, 94%, 137%, 114% and 94% respectively from 2014 – 2018. In 2014 to 2016 cash ratio gradually increases that was due to the increase in cash and cash equivalents. Despite being in the midst of fluctuating coal prices, PT ITM was able to maintain its liquidity value as reflected in the increase in cash and cash equivalents. In 2017, cash ratio decreased that was due to significant increase in current liabilities by 37.13%. In 2018, cash ratio decreased to 94% from 114% that was due to increase in investment of fixed assets. To maintain the Company's growth and sustainability, investment in fixed assets purchases and exploration costs took place in 2018 and followed by increased in current liabilities was 19.05%.

ITM current ratios were 156%, 180%, 226%, 243% and 197% respectively from 2014 – 2018. Trend current ratio from 2014 to 2017 gradually increased. In 2018, current ratio decreased to 197% from 243% that was due to decreased in current assets was 3.83% and followed by increased in current liabilities was 19.05%.

ITM quick ratios were 155%, 139%, 200%, 210% and 169% respectively from 2014 – 2018. In 2016, quick ratio significantly increased to 200% from 139% that was due to significantly decreased in inventory was 47.18% and followed by decreased in current liabilities was 16%. In 2018, quick ratio decreased to 169% from 210% that was due to decreased in current asset but amount of inventory was stable and followed by increased in current liabilities was 19.05%. Overall, the results of PT ITM's liquidity ratio show that PTBA has sufficient ability to pay off all of its short-term obligations.

Figure 6. Liquidity Performance of PT Adaro Energy (2014 – 2018)

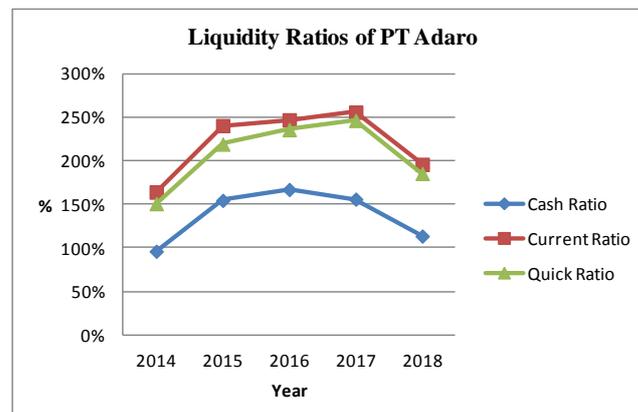


Figure 6 showed liquidity ratio (cash ratio, current ratio and quick ratio) of PT Adaro Energy from 2014 – 2018. Adaro cash ratio was 96%, 155%, 167%, 156% and 114% respectively from 2014 – 2018. In 2018 cash ratio decreased to 114% from 156%. The decreased was due to the decreased in cash and cash equivalents was 23.11%. The decrease of cash and cash equivalent that was due to purchase of fixed asset, payment of bank loans and payment of dividend that was 2 times greater than previous year.

Adaro current ratio was 164%, 240%, 247%, 256% and 196% respectively from 2014 – 2018. Based on result, current ratio showed fluctuating trend. In 2018, current ratio decreased to 196% from 256% that was due to decreased in current assets by 19.14% mainly caused by decrease in cash and cash equivalent.

Adaro quick ratio was 151%, 219%, 236%, 246% and 186% respectively from 2014 – 2018. Based on result, quick ratio showed fluctuating trend. In 2018, quick ratio decreased to 186% from 246% that was due to decreased in current asset by 19.14% and followed by increase in inventory as deduction by 31.05%. Overall, the results of PT Adaro's liquidity ratio show that PT Adaro has sufficient ability to pay off all of its short-term obligations.

Table 3. Average of Liquidity Ratios of Three Coal Mining Companies (2014 – 2018)

| Liquidity Performance | PT BA | PT ITM | PT Adaro | Average Industry Ratio |
|-----------------------|-------|--------|----------|------------------------|
| Cash Ratio | 91% | 100% | 138% | 110% |
| Current Ratio | 204% | 200% | 221% | 208% |
| Quick Ratio | 177% | 167% | 208% | 184% |

Source: Author, 2020

The cash ratio index in the table 3.1 showed that the industry average ratio for 2014-2018 was 110%. PT Adaro has an average cash ratio of 138%. This value is above the average cash ratio of the industry. Meanwhile PT Bukit Asam has an average ratio of 91% and PT ITM has average ratio of 100%. This value is below the industry average cash ratio. Current ratio index in the table shows that the 2014-2018 industry average ratios is 208%. PT Adaro has an average value current ratio of 221%. This average ratio is above the industry average ratio. Meanwhile, PT Bukit Asam has an average ratio of 204% and PT ITM has average ratio of 200%. This value is below the industry ratio average. The quick ratio index in the table shows that the 2014-2018 industry average ratio was 184%. PT Adaro has an average quick ratio of 208%. This value is above the average industry ratio. Meanwhile, PT Bukit Asam has average ratio of 177% and PT ITM has average ratio of 167%. This value is below the industry average ratio. Ideally ratio liquidity is 1.5 times up to 2 times. Although PTBA has average value cash ratio less than 1 that indicated no more cash to pay its debt but PTBA has ability to pay its debt by other component of current assets. Despite the fluctuating of coal prices, all companies can maintain liquidity. All companies are liquid and PT Adaro is the most liquid company.

B. Profitability Analysis

Figure 7. Profitability Performance of PT Bukit Asam (2014 – 2018)

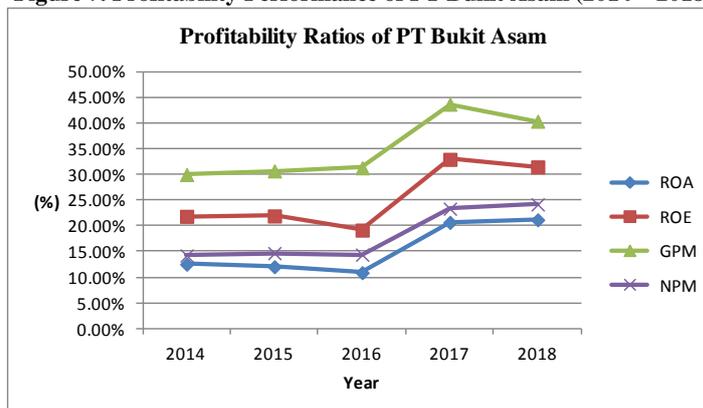


Figure 7 showed capability of PT. Bukit Asam in generating earning from 2014 to 2018. PT. Bukit Asam ROA was 12.54%, 12.06%, 10.90%, 20.68%, and 21.19% respectively from 2014 – 2018. In the view of earnings generated from its assets ROA showed decrease from 2014 to 2016. The decrease in 2015 was due to increase in total assets by 13.68% is greater than increase in net income was 9.3%. It indicated there was ineffectively manage their assets into profits. Net income for the year 2016 decreased to 0.63%. The decrease was due to the increase of income tax expenses. In 2017, ROA increase to 20.68% that was due to the increase in net income of 2017 was 124.62%.

PT. Bukit Asam ROE was 21.86%, 21.93%, 19.18%, 32.95%, and 31.48% respectively from 2014 – 2018. In the view of earnings generated from its equity, ROE showed there was decline in 2016 because net income decreased was 0.62% but shareholder's equity increased was 13.62%. The increase came from an increase in the retained earnings. In 2017, ROE increase to 32.95% from 19.18%. The increase was due to growth net income of 2017 to 124.62%. The significant increase in net income 2017 was contributed to the significant increase in Revenue 38.50%. In addition, the efforts of the Management in reducing cost of good

sold through efficiency efforts managed to reduce percentage cost of good sold to revenue into 56.31% in 2017 compared with 68.69% in 2016. In 2018, ROE decreased to 31.48 that was due to increase in shareholder's equity is greater than net income. Net income in 2018 increased to 12.62% compared to 2017. Shareholder's equity increased to 17.9%. The increasing profit for the year in 2018 was contributed by an increase in revenue of 8.71%.

PT. Bukit Asam GPM was 29.99%, 30.71%, 31.31%, 43.69%, and 40.37% respectively from 2014 – 2018. As shown on data, the gross margin percentages of PT BA gradually increase from 2014 to 2017. The increase in 2017 was due to the significant improvement in the revenue of the company was 38.50% and followed by the increase in cost of good sold which was only 13.53%. Therefore, PT Bukit Asam generated optimum gross profit in 2017. The decrease in gross profit 2018 was due to the increase in cost of good sold which was 15.11% and growth of revenue was only 8.71%.

PT Bukit Asam NPM was 14.25%, 14.71%, 14.40%, 23.35% and 24.19% respectively from 2014 – 2018. In 2016, NPM has declined that was due to decrease in net income was 0.62% from 2015 and growth of revenue in 2016 is only 1.56% from 2015. As shown on data, the net profit margin percentage of PT BA in 2017 increases to 23.35% from 14.40% in 2016. The increase was due to growth net income of 2017 to 124.62%. In 2018, NPM increased to 24.19% that was due to increase in net income was 12.62%. It caused by increase in sales was 8.7% and followed by decrease in operating expense was 13.2%. Trend of NPM shows net profit margin ratio has increase, it means positive to the growth of the company.

Figure 8. Profitability Performance of PT ITM (2014 – 2018)

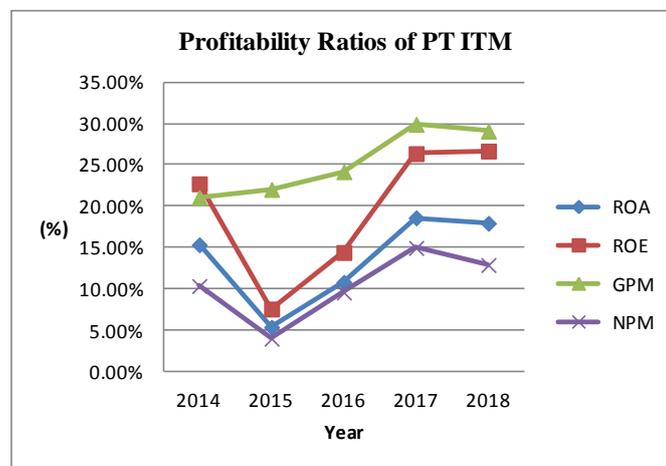


Figure 8 showed capability of PT. Indo Tambangraya Megah in generating earning from 2014 to 2018. PT. ITM ROA was 15.34%, 5.36%, 10.80%, 18.60%, and 17.94% respectively from 2014 – 2018. In 2015, ROA decrease to 5.36% from 15.34% that was due to decreased in net income was 68.60%. The decline in 2015 was mainly due to a decrease in the average selling price of coal which reduced sales volume in 2015. In 2016 to 2017, ROA increased. There was significant growth in net income 2016 by 107.12% and in 2017 by 93.33%. Despite the volatility of coal selling price, ITM has succeeded in carrying out efficiency cost to generate growth significant net income.

PT. ITM ROE was 22.72%, 7.56%, 14.40%, 26.37%, and 26.68% respectively from 2014 – 2018. In 2015, ROE decrease to 7.56% from 22.72% that was due to decreased in net income was 68.60%. In 2016 to 2018, ROE gradually increased. There was significant growth in net income 2016 by 107.12% and in 2017 by 93.33%.

PT. ITM GPM was 21.05%, 22.04%, 24.18%, 29.92%, and 29.09% respectively from 2014 – 2018. As shown on data, there was gradually increase GPM from 2014 to 2017. Net sales in 2015 decreased by 18.18% compared to 2014. Under the fluctuating of coal selling price in 2015 and 2016, PT ITM succeeded doing efficiency effort so the increase was recorded in gross profit margin. PT ITM NPM was 10.35%, 3.97%, 9.56%, 14.96% and 12.89% respectively from 2014 – 2018. In 2015, NPM decrease to 3.97% from 10.35% that was due to decreased in net income was 68.60%. In 2016 to 2017, NPM significant increased. There was significant growth in net income 2016 by 107.12% and in 2017 by 93.33%. ITM's Net Revenue in 2017 and 2018 increased by 24% and 19%. This was caused by higher average coal selling price. During 2018, only the net profit margin against total equity decreased. This indicates that PT ITM is successful in cost efficiency management so that the profitability margin can be maintained properly.

Figure 9. Profitability Performance of PT Adaro Energy (2014 – 2018)

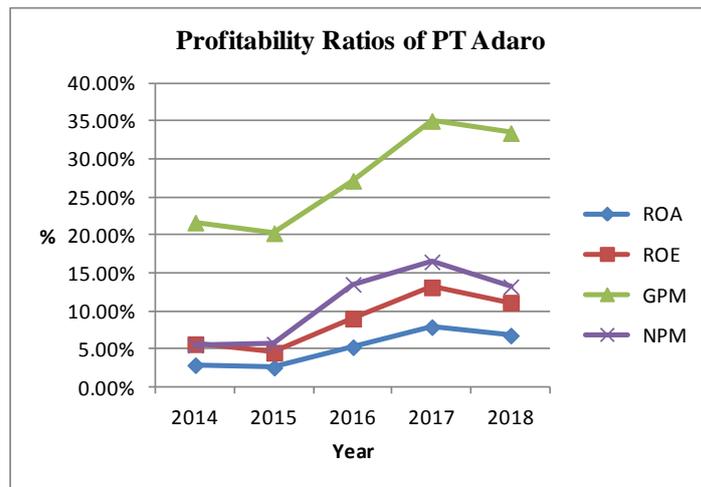


Figure 9 showed capability of PT. Adaro Energy in generating earning from 2014 to 2018. PT. Adaro ROA was 2.86%, 2.53%, 5.22%, 7.87%, and 6.76% respectively from 2014 – 2018. Based on result, from 2014 to 2017 ROA gradually increased. In 2018, ROA decreased to 6.76% from 7.87% that was due to increase in total asset was 3.62% but decrease in net income was 10.98% than previous year. It indicated there was ineffectively manage their assets into profits.

PT. Adaro ROE was 5.62%, 4.5%, 9%, 13.11%, and 11.1% respectively from 2014 – 2018. Based on result, ROE gradually increased from 2014 to 2017. In 2018, ROE decreased to 11.1% from 13.11% that was due to decrease in net income by 10.98% than previous year.

PT. Adaro GPM was 21.64%, 20.24%, 27.15%, 35.03%, and 33.43% respectively from 2014 – 2018. Based on result, GPM showed fluctuating trend. In 2015, GPM decreased to 20.24% from 21.64% that was due to decrease in sales by 19.27% but Adaro succeeded management efficiency cost so followed by decrease in cost of good sold 17.83%. In 2016, GPM increase to 27.15% from 20.24%. Although sales in 2016 still decreased by 5.97% but the decrease in cost of good sold was greater by 14.11%. In 2017, GPM increased to 35.03% from 27.15% that was due to increase in sales 2017 by 29.08% but in 2018 GPM decrease to 33.43% from 35.03% that was due to increase in cost of good sold was 13.83% but increase in sales was 11.09%. It indicated, PT Adaro is less effective in managing costs of good sold.

PT. Adaro NPM was 5.51%, 5.63%, 13.50%, 16.46%, and 13.19% respectively from 2014 – 2018. Based on result, NPM gradually increased from 2014 to 2017. In 2018, NPM decreased to 13.19% from 16.46% that was due to decrease in net income by 10.98% than 2017 and significant increase in operating expense 67.81%.

Table 4. Average of Profitability Performance of Three Coal Mining Companies (2014 – 2018)

| Profitability Performance | PT BA | PT ITM | PT Adaro | Average Industry Ratio |
|---------------------------|-------|--------|----------|------------------------|
| ROA | 15% | 14% | 5% | 11% |
| ROE | 25% | 20% | 9% | 18% |
| GPM | 35% | 25% | 27% | 29% |
| NPM | 18% | 10% | 11% | 13% |

Source: Author, 2020

The ROA ratio index in the table shows that the 2014-2018 industry average ratio was 11%. PT Bukit Asam has an average ratio of 15% and PT ITM has an average ratio of 14%. This value is above the average industry ratio. Meanwhile PT Adaro has an average ratio of 5%. This value is below the industry ratio average. The ROE ratio index in the table shows that the 2014-2018 industry average ratio was 18%. PT Bukit Asam has an average ratio of 25% and PT ITM has an average ratio of 20%. This value is above the average industry ratio. Meanwhile PT Adaro has an average ratio of 9%. This average value is below the industry ratio average. GPM ratio index in the table shows that the 2014-2018 industry average ratio was 29%. PT Bukit Asam has an average ratio of 35% and PT Adaro has an average ratio of 27%. This value is above the average industry ratio. Meanwhile, PT ITM has an average ratio of 25%. This value is below the industry ratio average. NPM ratio index in the table shows that the 2014-2018 industry average ratio was 13%. PT Bukit Asam has an average ratio of 18%. This value is above the average industry ratio. Meanwhile PT Adaro has an average ratio of 11% and PT ITM has an average ratio of 10%. This value is below the industry ratio average. Despite on the fluctuating of coal prices, all companies are in profit condition and PT Bukit Asam has the best profitability performance because average all of profitability ratios are above average industry ratios.

C. Solvability Analysis

Figure 10. Solvability Performance of PT Bukit Asam (2014 – 2018)

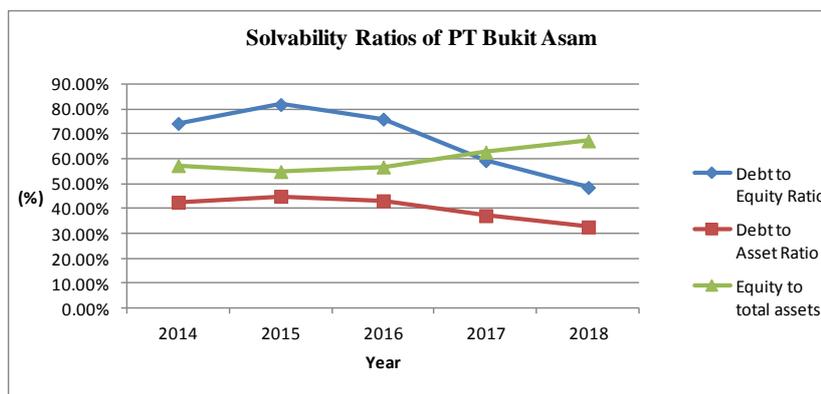


Figure 10 showed solvability performance of PT. Bukit Asam from 2014 to 2018. PT Bukit Asam DER was 74.32%, 81.90%, 76.04%, 59.33%, and 48.58% respectively from 2014 – 2018. As shown on data, DER of PTBA increased in 2015 to 81.90% from 74.32%. The increase in DER that was due to the increase in the liabilities was 20.01% and followed by increase in equity was only 8.94%. The higher DER value indicates that the company is funded more by creditors than by investor. A higher value of DER is favorable indicating high risk. During period 2015 to 2018, there is a gradually decrease in percentage of debt/equity ratio. PT Bukit Asam DAR was 42.63%, 45.02%, 43.20%, 37.24%, and 32.69% respectively from 2014 – 2018. In 2015, DAR increase to 45.02% that was due to increase in short term liabilities mainly trade payable was 127.8%. Trend of DAR showed there is a gradually decrease in percentage of debt/asset ratio. DAR is less than 50%. This indicates that the company funds its assets using equity rather than debt.

PT Bukit Asam TETA was 57.37%, 54.98%, 56.80%, 62.76%, and 67.31% respectively from 2014 – 2018. Trend of TETA showed there is a gradually increase in the percentage. TETA is more than 50%, it indicates that the company funds its assets using equity rather than debt. An increase in the ratio of equity to assets has implications for reducing dependence on debt to finance the company.

Figure 11. Solvability Performance of PT ITM (2014 – 2018)

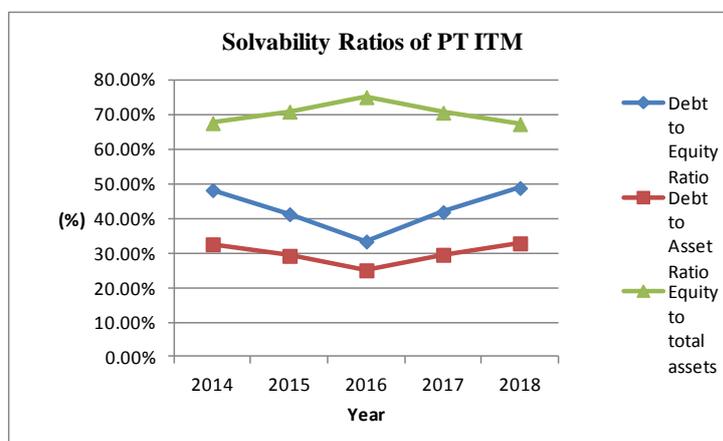


Figure 11 showed solvability performance of PT. Indo Tambangraya Megah from 2014 to 2018. PT ITM DER was 48.14%, 41.20%, 33.32%, 41.80%, and 48.77% respectively from 2014 – 2018. Based on the results, during this period DER showed a fluctuating trend. In 2015 and 2016, DER decreased to 41.20% then 33.32% that was due to decrease in liabilities was 19.27% and 12.05%. In 2017 and 2018, DER increased that was due to increased in liabilities by 32.47% and 18.08%. During this period, DER is less than 50 DER is less than 50%, it means that most of the company's financing through by investors rather than creditors.

PT ITM DAR was 32.50%, 29.18%, 24.99%, 29.48%, and 32.78% respectively from 2014 – 2018. Based on the results, during this period DAR showed a fluctuating trend. In 2015 and 2016, DAR decreased to 29.18% then 24.99% that was due to decrease in liabilities by 19.27% and 12.05%. In 2017 and 2018, DAR increased that was due to increased in liabilities by 32.47% and 18.08%. DAR is less than 50%. This indicates that the company funds its assets using equity rather than debt.

PT ITM TETA was 67.50%, 70.82%, 75.01%, 70.52%, and 67.22% respectively from 2014 – 2018. Based on the results, during this period TETA showed a fluctuating trend. TETA is more than 50%, it indicates that the company funds its assets using equity

rather than debt. An increase in the ratio of equity to assets has implications for reducing dependence on debt to finance the company.

Figure 12. Solvability Performance of PT Adaro Energy (2014 – 2018)

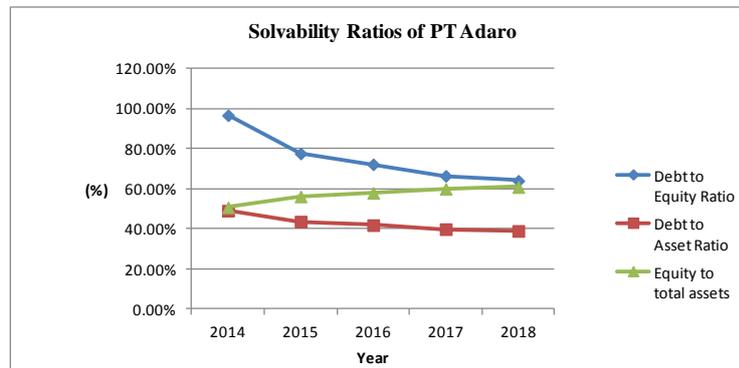


Figure 12 showed solvability performance of PT. Adaro Energy from 2014 to 2018. PT Adaro DER was 96.78%, 77.71%, 72.28%, 66.54%, and 64.10% respectively from 2014 – 2018. Based on result, there was gradually decreased from 2014 to 2018. During this period, DER is more than 50%, it means that most of the company's financing by creditor than investor. Since 2014 to 2018 companies tried to strengthen their capital structure.

PT Adaro DAR was 49.18%, 43.73%, 41.95%, 39.95%, and 39.06% respectively from 2014 – 2018. Based on result, there was gradually decreased from 2014 to 2018. DAR is less than 50%, it means that most of the company's assets are financed through equity.

PT Adaro TETA was 50.82%, 56.27%, 58.05%, 60.05%, and 60.94% respectively from 2014 – 2018. Based on result, there was gradually increased from 2014 to 2018. TETA is more than 50%, it means that most of the company's assets are financed through equity. The increasing equity to assets ratio implies decreasing adoption of debt to finance the company.

Table 5 Average of Solvability Ratios of Three Coal Mining Companies (2014 – 2018)

| Solvability Performance | PT BA | PT ITM | PT Adaro | Average Industry Ratio |
|-------------------------|-------|--------|----------|------------------------|
| DER | 68% | 43% | 75% | 62% |
| DAR | 40% | 30% | 43% | 38% |
| Equity to TA | 60% | 70% | 57% | 62% |

Source: Author, 2020

The DER ratio index in the table shows that the 2014-2018 industry average ratio is 62%. PT ITM has an average ratio of 43%. This value is below the average industry ratio. While PT Adaro has an average ratio of 75% and PT Bukit Asam has an average ratio of 68%. This value is above the industry ratio average. A high DER level will lead to lower company performance. This is due to the high interest expense so investors tend to choose stocks with low DER. The DAR ratio index in the table shows that the 2014-2018 industry average ratio was 38%. PT ITM has an average ratio of 30%. This value is below the average industry ratio. While PT Adaro has an average ratio of 43% and PT Bukit Asam has an average ratio of 40%. This value is above the industry ratio average. The Equity to Total Asset ratio index in the table shows that the 2014-2018 industry average ratio was 62%. PT ITM has an average ratio of 70%. This value is above the average industry ratio. Meanwhile PT Adaro has an average ratio of 57% and PT Bukit Asam has an average ratio of 60%. This value is above the industry ratio average. Based on data, PT Bukit Asam and PT Adaro have high average DER but their average DAR was ranged in 40%. It indicated if PT Adaro and PT Bukit Asam is liquidated, the capital could not to close his debt, but could be closed from the sale of company assets. All companies are solvable in period 2014 – 2018 and PT ITM has a lower risk than PTBA and PT Adaro because all of solvability ratios of PT ITM meet the average industry ratio.

D. Activity Analysis

Figure 13. Activity Performance (TATO, ITO and FAT) PT Bukit Asam (2014- 2018)

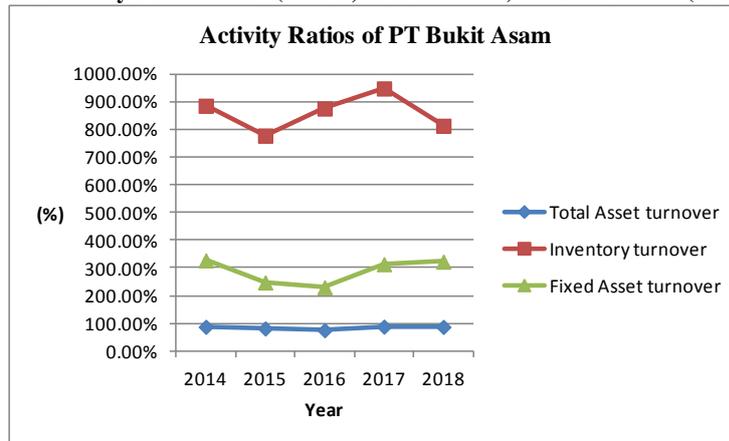


Figure 14. Activity Performance (Collection Period) PT Bukit Asam (2014- 2018)

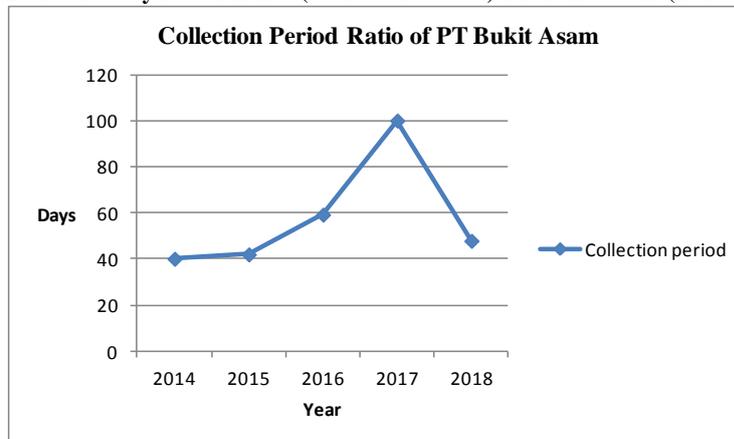


Figure 13 and 14 showed activity performance of PT. Bukit Asam from 2014 to 2018. PT Bukit Asam TATO was 88%, 81.95%, 75.68%, 88.56%, and 87.56% respectively from 2014 – 2018. TATO measures the efficiency of company to generate sales from its asset. The higher the ratio the more efficient the company uses its assets to generate sales. In 2016, total asset turnover decreased to 75.68% from 81.95% that was due to the increase of its revenue was only 1.54% but total asset increased to 10%. It indicates the inefficiency of the company in using its assets to generate sales. In 2017, PTBA has the highest TATO was 88.56% that was due to the increase in total asset was 18.36% and followed by increase in revenue to 38.50%. It means that in 2017 the company more efficient using the asset.

PT Bukit Asam ITO was 886%, 778%, 876%, 948%, and 814% respectively from 2014 – 2018. Inventory turnover is a ratio showing how many times a company’s inventory is sold and replaced over a period of time. As shown on data, PT Bukit Asam ITO was fluctuating trend. In 2017 PT Bukit Asam has the highest ITO. ITO increased to 948% from 876%. That increase was due to increase in cost of good sold to 13.53% and followed by increase in inventory was only 4.87% and in 2018, ITO has decreased to 814% that was due to significant increase in inventory was 34.18%. In 2017 PTBA is more efficient in managing its inventories.

PT Bukit Asam FAT was 328%, 248%, 231%, 314%, and 323% respectively from 2014 – 2018. As shown on data, in 2015 FAT decreased to 248% from 328% and then decline in 2016 to 231%. The decrease in 2015 was due to significant increase in fixed asset was 39.91% but revenue increased was only 5.87%. A low fixed asset turnover ratio indicates that the company is not using its assets efficiently and effectively. In 2017, FAT increase to 314% that was due to increase in fixed asset was 1.83% and followed by significant increase in revenue was 38.50%. High fixed asset turnover indicates that fixed assets are used efficiently and that sales are generated using only a small amount of assets.

PT Bukit Asam Collection period was 40, 42, 59, 100 and 48 days respectively from 2014 – 2018. In 2017, collection Period PTBA decrease into 100 days compared in 2016 which was 59 days. The increase was due to increase in account receivable was 133.85%. The increase in sales volume and the price increase with PT PLN (Persero) agreed at the end of 2017 are the main cause of the increase in trade receivables of PT BA. In 2018, collection period increase to 48 days that was due to decrease in account receivable to 47.95%. This decrease was due to the payment of accounts receivable, especially from the PLN Group.

Figure 15. Activity Performance (TATO, ITO and FAT) of PT ITM (2014 – 2018)

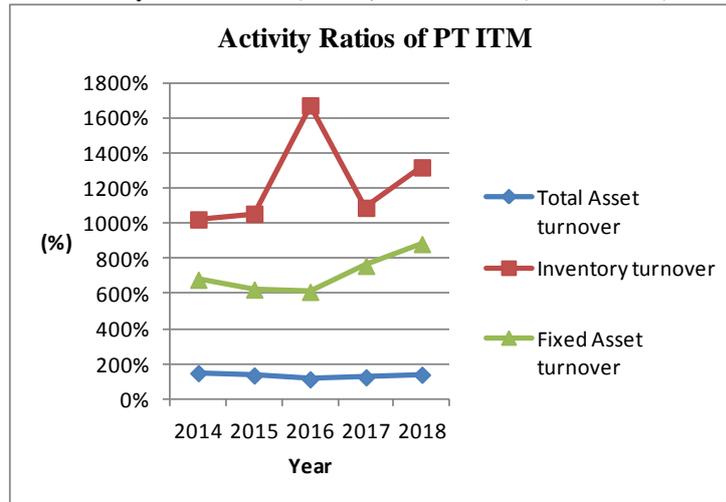


Figure 16. Activity Performance (Collection Period) PT ITM (2014 – 2018)

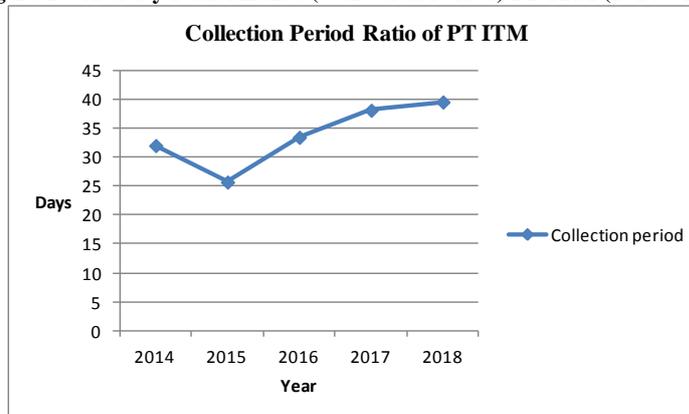


Figure 15 and 16 showed activity performance of PT. Indo Tambangraya Megah from 2014 to 2018. PT ITM TATO was 148%, 135%, 113%, 124%, and 139% respectively from 2014 – 2018. Based on the results, during this period TATO showed a fluctuating trend. TATO decreased in 2015 and 2016 that was due to decreased in sales was 18.18% in 2015 and 13.96% in 2016. Such decrease was mainly caused by the lower average coal selling price and lower sales volume. PT ITM recorded decrease in total asset in 2015 to 10.08% and in 2016 increase in total asset was 2.67%. In this condition, total assets of the company that use to generate sales is not as much as in other years. In 2017 and 2018, total asset of PT ITM increased was 12.31% and 6.19%. It was followed by increase in sales was 23.55% and 18.83%.

PT ITM ITO was 1023%, 1056%, 1672%, 1090%, and 1320% respectively from 2014 – 2018. Based on the results, during this period ITO showed a fluctuating trend. ITO increased in 2016 to 1672% from 1056%. In 2016, PT ITM has the highest ITO. That increase was due to significant decrease in inventory was 47.18%. In 2017, ITO decreased to 1090% that was due to significant increase in inventory was 75.31%.

PT ITM FAT was 680%, 624%, 611%, 759%, and 883% respectively from 2014 – 2018. Based on the results, during this period FAT showed a fluctuating trend. FAT decreased in 2015 and 2016 that was due to decreased in sales was mainly caused by the lower average coal selling price and lower sales volume. In line with this condition, the company has not made additional investments in fixed assets. In 2018, there was increase in the average price of coal. In line with this condition, company made additional investment in fixed assets by 2%. Increasing in fixed assets contributed to increase in revenue in 2018 by 18.83%. It was indicated that company used fixed asset efficiently to generate improvement sales.

PT ITM collection period was 32, 25, 33, 38 and 39. In 2015, collection period increased to 25 from 32 that was due to decreased in account receivable to 34.32%. As shown on data, collection period gradually decreased from 2015 to 2018. Overall, ITM succeeded to maintain its trade receivables liquidity. Most trade receivables receivable are categorized as current. The average collectability period was 1 month.

Figure 17. Activity Performance (TATO and FAT) of PT Adaro Energy (2014 – 2018)

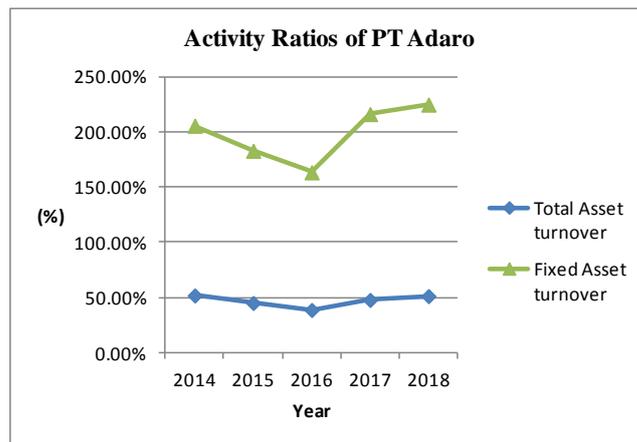


Figure 18. Activity Performance (ITO) of PT Adaro Energy (2014 – 2018)

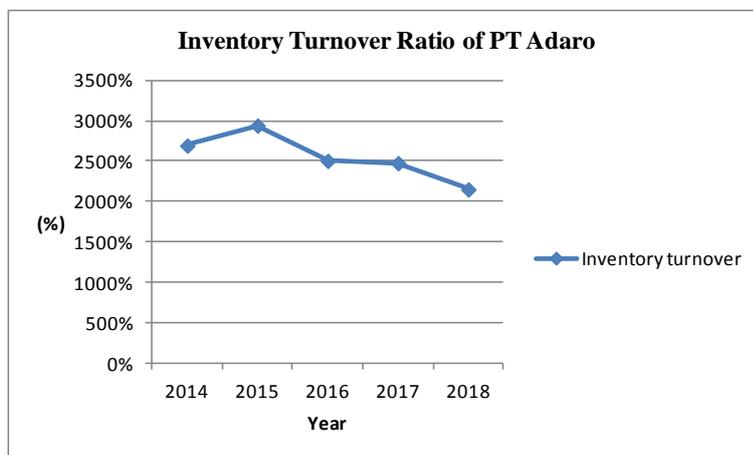


Figure 19. Activity Performance (Collection Period) of PT Adaro Energy (2014 – 2018)

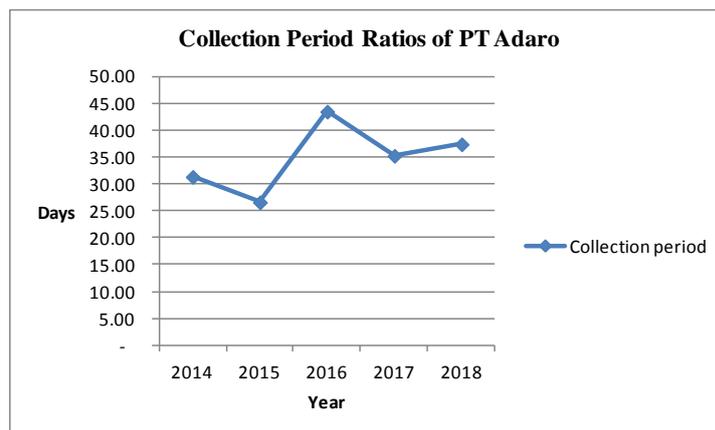


Figure 17, 18 and 19 showed activity performance of PT. Adaro Energy from 2014 to 2018. PT Adaro TATO was 51.85%, 45.05%, 38.70%, 47.82%, and 51.27% respectively from 2014 – 2018. Based on the results, during this period TATO showed a fluctuating trend. In 2015 and 2016, TATO gradually decreased. In 2016, there was increase in total asset was 9.46% but decrease in sales was 5.97%. It indicated that it is not efficiently using its assets to generate sales in 2016. In 2017 and 2018, TATO gradually increased to 47.82% and 51.27%. In this period, Adaro recorded growth of their total asset and sales. It indicated that it is efficiently using its assets to generate sales in 2017 and 2018.

PT Adaro ITO was 2693%, 2942%, 2505%, 2477%, and 2151% respectively from 2014 – 2018. Based on the results, from 2016 to 2018 ITO gradually decrease. The decrease was due to increase in inventory is greater than increase in cost of good sold. It indicated that PT Adaro has a lack of effectiveness and efficiency in managing its inventory than previous year.

PT Adaro FAT was 205.71%, 182.98%, 163.47%, 216.28%, and 224.7% respectively from 2014 – 2018. Based on the results, during this period FAT showed a fluctuating trend. In 2015 and 2016, FAT gradually decreased that was due to decrease in sales but in 2017 and 2018 FAT gradually increased. It indicated that company using fixed asset more efficient to generate sales in 2017 and 2018 than previous year.

PT Adaro collection period was 31, 27, 43, 35 and 37 days respectively from 2014 – 2018. In 2016, collection period decreased to 43 days from 27 that reflected in increase in account receivable by 53.65% while sales decreased to 5.97%.

Table 6. Average Activity Ratios of Three Coal Mining Companies (2014 – 2018)

| Activity Performance | PT BA | PT ITM | PT Adaro | Average Industry Ratio |
|----------------------|-------|--------|----------|------------------------|
| Total Asset Turnover | 84% | 132% | 47% | 88% |
| Inventory Turnover | 860% | 1232% | 2554% | 1549% |
| Collection period | 58 | 34 | 35 | 42 |
| FA Turnover | 289% | 712% | 199% | 400% |

Source: Author, 2020

The index of total asset turnover ratio in the table shows that the 2014-2018 industry average ratio is 88%. PT ITM has an average ratio of 132%. This value is above the average industry ratio. Meanwhile PT Adaro has an average ratio of 47% and PT Bukit Asam has an average ratio of 84%. This value is below the industry ratio average. The inventory turnover ratio index in the table shows that the industry average ratio for 2014-2018 is 1549%. PT Adaro has an average ratio of 2554%. This value is above the average industry ratio. Meanwhile, PT Bukit Asam has an average ratio of 860% and PT ITM has an average ratio of 1232%. This value is below the industry ratio average. The collection period ratio index in the table shows that the industry average ratio for 2014-2018 is 42 days. PT ITM has an average ratio of 34 days and PT Adaro has an average ratio of 35 days. This value is below the average industry ratio. Meanwhile, PT Bukit Asam has an average ratio of 58 days. This value is above the average industry ratio. The smaller the ratio value, the more effective the company is in collecting its trade receivables. The fixed assets ratio turnover index in the table shows that the 2014-2018 industry average ratio is 400%. PT ITM has an average ratio of 712%. This value is above the average industry ratio. Meanwhile, PT Bukit Asam had an average ratio of 289% and PT Adaro had an average ratio of 199%. This value is below the industry ratio average.

E. Correlation Analysis

Below the example for calculation of correlation analysis measurement using Pearson’s product moment (r) method.

Table 7. Correlation Coefficient between Cash Ratio and Stock Price of PTBA

| Year | X: Cash Ratio | Y: Stock Price | $(x_i - \bar{x})$ | $(y_i - \bar{y})$ | $(x_i - \bar{x})(y_i - \bar{y})$ | $(x_i - \bar{x})^2$ | $(y_i - \bar{y})^2$ |
|--------|---------------|----------------|-------------------|-------------------|----------------------------------|---------------------|---------------------|
| 2018 | 1.28 | 4,300 | 0.36 | 1,767 | 639.09 | 0.13 | 3,122,289 |
| 2017 | 0.81 | 2,460 | (0.11) | (73) | 7.76 | 0.01 | 5,329 |
| 2016 | 0.73 | 2,500 | (0.19) | (33) | 6.15 | 0.03 | 1,089 |
| 2015 | 0.63 | 905 | (0.28) | (1,628) | 459.29 | 0.08 | 2,650,384 |
| 2014 | 1.13 | 2,500 | 0.21 | (33) | (7.03) | 0.05 | 1,089 |
| Mean = | 0.91 | 2,533 | Sum = | 1,105.26 | 0.30 | 5,780,180 | |
| | | | r = | | | | 0.837 |

$$r = \frac{\sum_{i=1}^n (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_{i=1}^n (x_i - \bar{x})^2 \sum_{i=1}^n (y_i - \bar{y})^2}} = \frac{1.105,2648}{\sqrt{0.302 * 5.780.180}} = 0,837$$

This calculation is repeated for all of financial ratios of each company (PT BA, PT ITM and PT Adaro). The summary of the correlation coefficient calculation is shown in Table 8.

Table 8. Level of Correlation Coefficient between Financial Ratio and Stock Price

| No. | Description | PTBA | PT ITM | PT Adaro | Average | Level of Correlation |
|-----|------------------------|--------|--------|----------|---------|----------------------------------|
| 1 | Cash Ratio | 0.837 | 0.237 | 0.324 | 0.466 | Moderate positive correlation |
| 2 | Current Ratio | 0.665 | 0.526 | 0.373 | 0.521 | Moderate positive correlation |
| 3 | Quick Ratio | 0.645 | 0.578 | 0.480 | 0.568 | Moderate positive correlation |
| 4 | ROA | 0.643 | 0.918 | 0.802 | 0.788 | Strong positive correlation |
| 5 | ROE | 0.536 | 0.887 | 0.832 | 0.752 | Strong positive correlation |
| 6 | GPM | 0.529 | 0.744 | 0.751 | 0.674 | Strong positive correlation |
| 7 | NPM | 0.656 | 0.967 | 0.883 | 0.836 | Very strong positive correlation |
| 8 | DER | -0.862 | 0.167 | -0.450 | -0.382 | Weak negative correlation |
| 9 | DAR | -0.863 | 0.153 | -0.464 | -0.391 | Weak negative correlation |
| 10 | Equity to total assets | 0.863 | -0.153 | 0.464 | 0.391 | Weak positive correlation |
| 11 | TATO | 0.355 | -0.188 | -0.254 | -0.029 | Very weak negatif correlation |
| 12 | Inventory Turnover | 0.137 | 0.308 | -0.589 | -0.048 | Very weak negatif correlation |
| 13 | Collection period | 0.048 | 0.968 | 0.791 | 0.602 | Moderate positive correlation |
| 14 | FA Turnover | 0.572 | 0.655 | 0.078 | 0.435 | Moderate positive correlation |

From the findings, can be concluded that each of the correlation coefficient between financial ratios and stock price as follows:

1. Cash Ratio. From 3 companies, 3 companies have positive correlation and 0 companies have negative correlation coefficient with an average of correlation 0.466. This measurement shows if cash ratio increase, the stock price is likely to increase. The growth of cash ratio has a moderate correlation with stock price.
2. Current Ratio. From 3 companies, 3 companies have positive correlation and 0 companies have negative correlation coefficient with an average of correlation 0.521. This measurement shows if current ratio increase, the stock price is likely to increase. The growth of current ratio has a moderate correlation with stock price.
3. Quick Ratio. From 3 companies, 3 companies have positive correlation and 0 companies have negative correlation coefficient with an average of correlation 0.568. This measurement shows if quick ratio increase, the stock price is likely to increase. The growth of quick ratio has a moderate correlation with stock price.
4. Return on Asset. From 3 companies, 3 companies have positive correlation and 0 companies have negative correlation coefficient with an average of correlation 0.788. This measurement shows if return on assets increase, the stock price is likely to increase. The growth of return on assets has a strong correlation with stock price.
5. Return on equity. From 3 companies, 3 companies have positive correlation and 0 companies have negative correlation coefficient with an average of correlation 0.752. This measurement shows if return on equity increase, the stock price is likely to increase. The growth of return on equity has a strong correlation with stock price.
6. Gross Profit Margin. From 3 companies, 3 companies have positive correlation and 0 companies have negative correlation coefficient with an average of correlation 0.674. This measurement shows if gross profit margin increase, the stock price is likely to increase. The growth of gross profit margin has a strong correlation with stock price.
7. Net Profit Margin. From 3 companies, 3 companies have positive correlation and 0 companies have negative correlation coefficient with an average of correlation 0.836. This measurement shows if net profit margin increase, the stock price is likely to increase. The growth of net profit margin has a very strong correlation with stock price.
8. Debt to Equity Ratio. From 3 companies, 1 company has positive correlation and 2 companies have negative correlation coefficient with an average of correlation -0.382. This measurement shows if debt to equity ratio increase, the stock price is likely to decrease. The growth of debt to equity ratio has a weak correlation with stock price.
9. Debt to Assets Ratio. From 3 companies, 1 company has positive correlation and 2 companies have negative correlation coefficient with an average of correlation -0.391. This measurement shows if debt to asset ratio increase, the stock price is likely to decrease. The growth of debt to asset ratio has a weak correlation with stock price.
10. Equity to Total Asset. 2 companies have positive correlation and 1 company has negative correlation coefficient with an average of correlation 0.391. This measurement shows if equity to total assets increase, the stock price is likely to increase. The growth of equity to total assets has a very weak correlation with stock price.
11. Total Asset Turnover. 1 company has positive correlation and 2 companies have negative correlation coefficient with an average of correlation -0.029. This measurement shows if total asset turnover increase, the stock price is likely to decrease. The growth of total asset turnover has a very weak correlation with stock price.
12. Inventory Turnover. 2 companies have positive correlation and 1 company has negative correlation coefficient with an average of correlation -0.048. This measurement shows if inventory turnover increase, the stock price is likely to decrease. The growth of inventory turnover has a very weak correlation with stock price.
13. Collection Period. 3 companies have positive correlation and 0 companies have negative correlation coefficient with an average of correlation 0.602. This measurement shows if collection period increase, the stock price is likely to increase. The growth of collection period has a moderate correlation with stock price.

14. Fixed Asset Turnover. 3 companies have positive correlation and 0 companies have negative correlation coefficient with an average of correlation 0.435. This measurement shows if fixed assets turnover increase, the stock price is likely to increase. The growth of fixed asset turnover has a moderate correlation with stock price.

LIMITATION

This study is only use 3 coal mining companies that listed in LQ 45 and variable that used is only financial aspect. In near future, it is suggested to carry out research with many companies from coal mining industry to get more generalizes result and compared with average industry ratios.

CONCLUSION AND RECOMMENDATION

The study shows the financial performance and its correlation with stock price of coal mining companies listed in LQ 45 for 2014 and 2018 Based on the results of calculation of liquidity ratio analysis for 5 years (2014 - 2018), all companies are in liquid condition and PT Adaro Energy is the most liquid company. Based on the results of calculation of profitability ratio, all companies is profitable and PT Bukit Asam has the best profitability performance because all of profitability ratios are above the average industry ratio. Based on the results of calculation of solvency ratio, PT Bukit Asam and PT Adaro have high average DER (68% and 75%) that above average industry ratios but their average DAR was ranged in 40%. It indicated if PT Adaro and PT Bukit Asam is liquidated, the capital could not to close his debt, but could be closed from the sale of company assets so all companies are solvable in period 2014 – 2018. PT ITM has a lower risk than PTBA and PT Adaro because all of solvability ratios of PT ITM meet the average industry ratio. Based on the result of calculation of activity ratio, PT ITM is the most efficient in utilizing its resources because PT ITM has 3 activity ratios that meet the industry average ratio. Based on the ranking of the number of ratios that meet the industry average ratio, PT ITM has 8 financial ratios that meet the industry average ratio. This amount is more than the amount obtained by PT Bukit Asam and PT Adaro Energy.

The correlation of coefficient categories level divides into three categories based on correlation level. Significant influencer contains return on assets, return on equity, net profit margin with an absolute value of the average correlation coefficient ranged from of +0.674 - +0.836. The moderate influencer contains are cash ratio, current ratio, quick ratio, gross profit margin, collection period and fixed asset turnover margin with an absolute value of the average correlation coefficient ranged from of +0.435 - +0.602. The weak influencer contains are debt to equity ratio, debt to assets ratio, equity to total asset, total asset turnover and inventory turnover with an absolute value of correlation of coefficient from -0.029 - +0.391. This study has added the knowledge in the financial literature. It also gives a strong insight for managers in coal mining industries about the financial performance. Then the findings are also important for potential investor to make decision in stock market transaction.

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