

MEASURING AND ANALYSING FINANCIAL PERFORMANCE OF COAL MINING COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE BEFORE AND AFTER THE IMPLEMENTATION OF FAST TRACK PROGRAM 35.000 MEGA WATT OF 2016

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ABSTRACT

Government through Presidential Regulation No. 4 of 2016 to accelerate the development of electricity infrastructure including the construction of 35,000 MW power plants by prioritizing the use of new and renewable energy in order to support efforts to reduce glass gas emissions. The purpose of this lesson is to measure and analyze the financial performance of coal mining companies listed on the Indonesia Stock Exchange: PT Adaro Energy Tbk, PT Atlas Resources Tbk, PT Toba Bara Sejahtera Tbk, PT Baramulti Suksessarana Tbk, PT Mitrabara Adiperdana Tbk, PT Bayan Resources Tbk, PT Resource Alam Indonesia Tbk, PT Delta Dunia Makmur Tbk, PT Indo Tambangraya Megah Tbk, and PT Bukit Asam (Persero) Tbk during the period before and after the implementation of the 35,000 MW power plant development program by prioritizing the use of new and renewable energy in 2013-2018 using financial ratio analysis based on SOE Ministerial Decree No. KEP-100 / MBU / 2002. Using the paired t-test statistical method to find out significant differences. The results of measuring and analysing the financial performance are return on equity, return on investment, cash ratio, current ratio, collection period, inventory turnover, total asset turnover, and total equity to total asset ratio. Those will be validated by the government regulation and paired t-test. Toba Bara and Mitrabara got ratings AAA levels. Indo Tambangraya, Bukit Asam, Adaro, Baramulti, Bayan, Delta got rank AA levels. Resource Alam Indonesia got BB level. Atlas Resources was the worst, i.e. CCC level.

Keywords: Financial Performance, Financial Ratio, Paired t-test, Coal Mining Industry

INTRODUCTION

The issue of climate change has become a widely discussed phenomenon in the last few decades. The discussion revolved not only in the national circle but also in the international scale, and even in the individual. It was because climate change has occurred everywhere and has been experienced by individuals. One of the causes of climate change is carbon (C) gas emissions. Global carbon emissions from fossil fuel use were 9.795 Gigatonnes (Gt) in 2014 (or 35.9 GtCO₂ of carbon dioxide). Fossil fuel emissions were 0.6% above emissions in 2013 and 60% above emissions in 1990 (The Kyoto Protocol, 1997). Based on the 2015 GDP forecast of 3.1% by the International Monetary Fund, the Global Carbon Project projects showed a decline in global emissions for 0.6%.

Industrial countries through The Kyoto Protocol in 2005 agreed to reduce their Greenhouse Gases (GHG) emissions collectively by 5.2% more than that in 1990. The agreement aimed to reduce the average emissions of six greenhouse gases, such as GHG-Carbon Dioxide, Methane, Nitrous Oxide, Sulfur Hexafluoride, HFC, and PFC based on an average calculation over a five-year period from 2008 to 2012. The 1997 Kyoto Protocol Commitment Period expired in 2012 and was carried out through the Paris Agreement agreed and ratified in 2016.

Indonesia was one of the countries which signed and agreed to the Paris Agreement of the United Nations Framework Convention on Climate Change on April 22, 2016, in New York, the United States. Indonesia argued that the condition of the mixed utilization of energy sources in 2016 was still dominated by fossil energy. Petroleum energy sources still became the main focus of Indonesians by reaching 43%, followed by coal energy for 28%, and natural gas for 22%. Meanwhile, the use of non-fossil energy only reached 6.2%.

Fossil fuels, including coal, oil, and gas, are energy sources which produce Carbon Dioxide gas (CO₂) released into the atmosphere as residual combustion. This has resulted in fossil fuel power plants as a major and great contributor to GHG and global warming. Coal itself produces GHG at least three times more than natural gas. Based on the current development of the economy of Indonesia, the recalculation of the Domestic Market Obligation (DMO) target for coal in the Medium Term Development Plan document from 2015 to 2019 showed the results of the projected calculation in which the total national coal consumption could be absorbed by 45% or 180 million tons of coal. Meanwhile, 91% of 180 million tons of coals was consumed by power plants, 6% by the cement industry, and 3% by fertilizer, textile, metallurgy, and pulp industries. PT Indonesia Power stated that in 2018 the Suralaya Steam Power Plant in Banten had the largest capacity in Indonesia reaching 3,400 Megawatts (MW). The power generated has entered into the Java-Bali electricity system.

The demand of coal in Indonesia is still quite high, and new regulation aimed at reducing energy consumption is derived from coal, namely Presidential Regulation Number 4 of 2016. This regulation concerns with the Acceleration Electricity Infrastructure Development which was later amended in the Presidential Regulation Number 14 of 2017 as an improvement to the regulation regarding the implementation of financing, cooperation provision schemes electricity infrastructure development, work same use of assets, and environmental management. In this program, clean energy such as gas, biogas, and geothermal get better space than before. Financial coal mining companies will probably experience a downward trend in the market because of the government policy on reducing coal consumption and using non-fossil for energy source. If generator power is a subject to market competition, coal production will be forced to stop when off-market payments cannot be secured, or environmental

regulations are not reduced. Economists considered the fate of companies that had been running coal mining businesses, whether companies were financially experiencing a downward trend in the market, or they could turn their products into alternative energy by considering the company's financial performance. Therefore, this study focuses on discussing the performance of the coal companies' financial performance since they need to set plans and projects, survive, develop, and become sustainable. Financial performance is adopted to invest resources, such as human resources, natural resources, equipment, etc. to serve the company's objectives to achieve their interests and sufficient returns from financial operations, funding, and investment activities.

Ten coal companies were analyzed in this study, they were PT Adaro Energy Tbk., PT Atlas Resources Tbk., PT Toba Bara Sejahtera Tbk., PT Baramulti Suksesarana Tbk., PT Mitrabara Adiperdana Tbk., PT Bayan Resources Tbk., PT Resource Alam Indonesia Tbk., PT Delta Dunia Makmur Tbk., PT Indo Tambangraya Megah Tbk., and PT Bukit Asam (Persero) Tbk.. Of the 22 coal mining companies listed on the Indonesia Stock Exchange, only 10 companies were involved as the research sample. The selection was conducted based on several criteria: the listed shares were above one billion, the company had been established for more than twelve years, financial reports on the stock exchange had been published since 2013, the company's concession land was more than a thousand hectares, and the volume of coal production was above 4 million tons per year.

The Government of the Republic of Indonesia issued Presidential Regulation Number 4 of 2016 concerning Development Acceleration Electricity Infrastructure which was later amended in the Presidential Regulation Number 14 of 2017 as an improvement to the regulation regarding implementation of financing, cooperation provision schemes electricity infrastructure development, work same use of assets, and environmental management. This regulation aims to:

1. increase the fulfillment of the people's electricity needs fairly and equitably and encourage economic growth, where it is necessary to accelerate the development of electricity infrastructure including the construction of 35,000-MW power plants and transmission lines along 46,000 km by prioritizing the use of new and Renewable Energy to support efforts to reduce greenhouse gas emissions; and
2. Implement electricity infrastructure development, whereby the Central Government assigns PT PLN (Persero) to provide support in the form of guarantees, acceleration of licensing and non-licensing, primary energy supply, spatial planning, land supply, and resolution of obstacles and problems, and resolution of legal issues facing.

After the emergence the regulation of the development of electricity infrastructure, including the construction of 35,000-MW of power plants, coal production realization reached 548 Million tons or 113% of the target. The realization of coal production in 2018 amounted to 548 million tons or 113% of the target. This was due to opportunities to increase national coal production in order that the company reached 100 million tons as regulated by DMO to increase the country's foreign exchange earnings. Therefore, in the Semester II 2018, the companies which held the authorities of the central government such as PKP2B, SOE IUPs, and PMA IUPs had submitted a revised production level of \pm 21 million tons. In addition, this was caused by the realization of regional coal production that exceeded the target, as well as the relatively high and stable price of coal during 2018 which resulted in Mining Business Licenses that were previously not producing mining operations. However, the allocation of domestic energy derived from domestic coal fulfillment indicators did not reach the target desired by the 35,000 MW regulations.

This study was developed to investigate the impacts of sustainability on the financial performance of coal companies listed on the stock exchange in Indonesia due to the phenomenon of the energy regulation in 2016 which has amendment in 2017. This study explored the economic roles, development of the coal mining business sector in Indonesia as one of the critical business sectors.

HISTORICAL OF COAL MINING IN INDONESIA

Indonesia is the fourth largest coal producer in the world (www.cnbcindonesia.com, published April 29, 2019). One of the largest coal mines in Indonesia is in Sangatta, East Kutai Regency. The first coal found in Indonesia was in East Kalimantan, in the Samarinda area in 1845. The inventors were traders from England who worked in the company owned by George Peacock (G.P.) King. The traders not only trade but also carry out investigations about the state of the land around the Mahakam River. Until finally they found places containing coal seams there. Initially, coal was used to drive transportation vehicles and steam engine factories. The Dutch who were in Indonesia at that time used transportation vehicles and steam engine factories. Throughout the 19th century, coal became a valuable commodity for the colonial government.

Coal has several levels of quality. G.P's Findings King was first of poor quality. The coal is not sold and cannot operate a steam engine. On a second search in the Palaran area not far from the first area, good quality coal was found that could drive a steam engine. Then G. P. King took care of permits for further excavation and coal trading. However, licensing was not approved by the Besluit colonial government (Decree) No. 45, October 24, 1850. The article contained a ban on granting permits to excavate land containing valuable mining material for parties other than the Netherlands.

Since 2005, Indonesia has become one of the largest coal producing and exporting countries in the world, even surpassing Australian production. Most of the thermal coal exported consists of medium quality types (between 5100 and 6100 cal / gram) and low quality types (below 5100 cal / gram), which mostly come from China and India. Based on information provided by the Indonesian Ministry of Energy and Mineral Resources, Indonesia's coal reserves are expected to be depleted in about 83 years if current production levels continue. From 2013 to 2018, there were several large coal companies in Indonesia, such as Adaro,

Adimitra Baratama Nusantara, Bayan Resources, etc. Indonesian coal production exported as much as 80%, and one third were exported to China (MEMR, 2018). In 2015, many Indonesian mining companies stopped their activities or reduced their production when coal prices reached USD 50 / ton. Indonesia's coal exports to China also fell by 30% that year. However, in 2017 coal exports have increased to neighboring countries and coal prices have stabilized. For developing countries, coal remains the most competitive cost of electricity generation. Malaysia is one of the countries in Asia that fully imports coal because it is very dependent on fossil fuels. More than 60% of coal was imported from Indonesia (IESR, 2019).

For local consumption, coal was more visible in the electricity sector because the contribution of coal reaches 50% of installed capacity in Indonesia and 58.1% of power generation in 2017 (DJK ESDM, 2018; MEMR, 2018). In East Kalimantan, the coal sector contributed up to 35% of the provincial GDP in 2017. Similar conditions could be found in the province of South Kalimantan, although there the GDP value was lower compared to East Kalimantan but the contribution of the coal sector in South Kalimantan ranges from 19-26% of Provincial GDP in the last five years (BPS, 2018).

Research Question

1. How good is the financial performance of coal mining companies, both private and state-owned companies, during the period before and after the implementation of the 35,000-Mega Watt Fast Track Program in 2013-2018 based on eight financial ratio measurements of the Minister Decree of SOE No. KEP-100/MBU/2002?
2. How significant is the difference in the financial performance of coal mining companies between the period before the implementation of the 35,000-Mega Watt Fast Track Program in 2013-2015 and after the implementation of the program in 2016-2018 using the paired t-statistical approach?

Study Objectives

1. To measure the financial performance of ten coal mining companies listed on the Indonesia Stock Exchange: PT Adaro Energy Tbk, PT Atlas Resources Tbk, PT Toba Bara Sejahtera Tbk, PT Baramulti Suksessarana Tbk, PT Mitrabara Adiperdana Tbk, PT Bayan Resources Tbk, PT Resource Alam Indonesia Tbk, PT Delta Dunia Makmur Tbk, PT Indo Tambangraya Megah Tbk, and PT Bukit Asam (Persero) Tbk during the period before and after the implementation of the 35,000-Mega Watt Fast Track Program in 2013-2018 using eight financial ratios from the Minister Decree of SOE No. KEP-100/MBU/2002; and
2. To investigate the significant differences of those ten coal mining companies, between the period before the implementation of the 35,000-Mega Watt Fast Track Program in 2013-2015 and after the implementation of the 35,000-Mega Watt Fast Track Program in 2016-2018 based on the result of calculating financial performance.

METHODOLOGY

This study employed a quantitative data analysis method. Data utilized in this study were secondary data obtained from two sources. The data were from the business financial reports and the literature study of educational books, research papers, publications, journals, articles, and expert reports. This study employed Financial Ratio Analysis, the Minister Decree of SOE No. KEP-100/MBU/2002 and t-test methods to understand the business situation and to explore the business problems of ten coal mining companies listed on the stock exchange in Indonesia. T-tests are performed in pairs from two samples for pre and post-studies. Financial ratio analysis is one method to assess the company's financial performance. This method will test the level of the company's health by calculating profitability ratios, liquidity ratios, activity ratios, and solvency ratios. Calculation of Financial Ratio Analysis in this study employed the formula that was in accordance with the statement of the Minister Decree of SOE No. KEP-100/MBU/2002. The regulation consists of eight financial ratios, namely Return on Capital (ROE), Return on Investment (ROI), Cash Ratio, Current Ratio, Billing Period, Inventory Turnover, Total Asset Turnover, and Total Equity to Total Assets. Furthermore, these ratios were employed as the data samples to conduct the statistical procedures of paired t-test.

Profitability Ratio

Return on Equity is employed to measure the ability of a business entity to generate profits by using equity already invested by shareholders. Return on Equity is expressed as a percentage and calculated by a formula of comparing net income after tax with the equity that has been invested by the company's shareholders (Van Horne and Wachowicz, 2005: 225). The profit margin is a measure of overall profitability (Robert N., David F. H., Kenneth A., 2011: 376). This ratio shows how good the company is in generating returns on investment received from its shareholders. Furthermore, ROE might provide an overview of how the company management uses financing from equity to grow the business. The increase of ROE from time to time can mean that companies generate or increase shareholder value. It frequently occurs because the company knows a way to reinvest its income, thereby increasing productivity and profits. Conversely, if there is a decrease in ROE, it can mean that management has made an awful decision to reinvest capital in unproductive assets.

$$ROE = \frac{\text{Net Income}}{\text{Total Equity}} \times 100\%$$

Return on Investment shows the number of assets used by the company to measure the efficiency of management in allocating all costs and capital to any relevant sections. This ratio can also be used for planning purposes, for example, as a basis for decision making if the company will expand. Accurate ROI calculation can obtain certainty and confidence that enable the business to grow. Furthermore, it is necessary to calculate the number of funds that are compulsorily invested in achieving sales targets, the number of profit margins obtained, and part of the profit margin, which will be used to develop the business. It is probably the ROI of stock investment, the ROI of an organization expecting a factory expansion, or the ROI generated in many asset transactions. The calculation is not absolutely complicated, but it is relatively easy to interpret its wide selection of applications. A negative ROI implies a net loss, and thus, investors must avoid this situation.

$$ROI = \frac{EBIT + Depreciation}{Capital Employed} \times 100\%$$

* $Capital Employed = Total Asset - Fixed Asset$

Liquidity Ratio

The cash ratio is a liquidity ratio that measures a firm's ability to pay off its current liabilities by using cash and cash equivalents. In cash ratios, it is only cash that can be used to pay off existing debts. This is why many creditors examine the cash ratio. They need to determine if a corporation maintains adequate cash balances to pay off all of their current debts as they are available dues. Furthermore, creditors only prefer indisputable facts that receivable inventory and accounts disregard equations because both of those accounts are not bound to be available for debt services. Inventory could take months or years to sell and receivables could take weeks to gather. Cash is bound to be available for creditors.

$$Cash Ratio = \frac{Cash and Cash Equivalent}{Current Liabilities} \times 100\%$$

The current ratio aims to determine a company's ability level to meet short-term obligations with the current assets of the company. The type of existing assets referred to is assets that can be exchanged for cash within one year. The current ratio is beneficial for lenders to determine if borrowers can pay their obligations. The higher the current rate is, the better ability of lenders to reduce their risks is. However, if a company's current rate is low, it does not mean that the company is in a bad financial condition. It probably indicates that the company allocates its existing assets efficiently and manages its capital well.

$$Current Ratio = \frac{Current Asset}{Current Liabilities} \times 100\%$$

Collection Periods ratio is employed to measure the average time needed by a company to collect each receivable result from buyers. The smaller results of this ratio mean that the company can receive payment in a short time or have a short credit life. The better the effectiveness of credit and business billing policies in companies are, the higher the ratio results will be. Comparing the results of the calculation collection period with credit terms offered by sellers to buyers will determine whether the customer has an excellent ability to pay.

$$Collection Periods = \frac{Total Account Receivables}{Total Sales Revenue} \times 365 \text{ days}$$

Activity Ratio

Inventory Turnover Ratio can show how effective the company can manage the inventory by comparing the Cost of Goods Sold (COGS) in an average inventory for a period. This ratio is employed to measure the effectiveness of ordinary management in turning inventory in a period. Furthermore, this ratio measures the number of times that a company sells its average total inventory during a particular year or period. This ratio becomes an indicator of determining the value of inventory quality and effective purchasing in inventory management. Business requires less cash flow or investment in inventory for ongoing business operations if the ratio is higher than industry standards. Therefore, companies need to concentrate on selling products that buyers mostly demand or reducing the blockage of funds in stock.

$$Inventory Turnover = \frac{Total Inventories}{Total Sales Revenue} \times 365 \text{ days}$$

Asset Turnover Ratio is employed to assess the efficiency or effectiveness of the company in utilizing assets owned by the company to generate sales. The ratio compares the level of sales and investment in all assets held, and thus, the financial accounting function can run well. The higher the turnover ratio is, the more efficient the company uses its assets. Conversely, a low level of the turnover ratio indicates that the company does not use its assets efficiently. Inefficient use of assets may occur because the company has management or production problems.

$$Total Asset Turnover = \frac{Sales Revenue}{Total Assets} \times 100\%$$

Solvency Ratio

The solvency ratio is employed to measure the comparison between funds provided by lenders and funds borrowed from a company's creditors. This ratio will measure to what extent the company's assets are financed by debts. One of the Solvency ratios is Total Equity to Total Asset Ratio. This ratio is employed to determine the relationship between long-term debts and the number of borrower capitals provided by the owner of the company. It intends to find out how many funds are provided by creditors with the company owner. The higher the ratio is, the smaller the company's capital is, when compared to its debt. A company with good policies has lower obligations than the capital they own. It is because the smaller the ratio is, the smaller and the safer the debt is held.

$$\text{Total Equity to Total Asset} = \frac{\text{Total Equity}}{\text{Total Asset}} \times 100\%$$

The procedure of financial level of healthiness of SOE

The financial health of private and state-owned companies was possibly measured by calculating financial ratios. Financial ratio values were assessed by using the SOE Ministerial Decree score table No. KEP-100/MBU/2002 (see Table 2-2). Total score produced a total weight score. This score became an indicator value to determine the category and level of a company's health. There were minimally two indicators and maximally five indicators used to assess health levels every year. It is highly suggested that the indicators used assess are changed from year to year. The assessment of each indicator was conducted qualitatively with the categories of assessment and determination of the scores as follows:

- Excellent (BS): score = 100% x The weight of the indicator concerned
- Good (B): score = 80% x Weight of the indicator concerned
- Enough (C): score = 50% x Weight of the indicator concerned
- Less (K): score = 20% x Weight of the indicator concerned

Table 1. Health Indicator of SOE

Company's Health Indicator		
Category	Value	Score
Healthy	AAA	>95
Healthy	AA	80<TS≤95
Healthy	A	65<TS≤80
Less Healthy	BBB	50<TS≤65
Less Healthy	BB	40<TS≤50
Less Healthy	B	30<TS≤40
Unhealthy	CCC	20<TS≤30
Unhealthy	CC	10<TS≤20
Unhealthy	C	TS≤10

Source: the decree of Ministry of SOE No. KEP-100/MBU/2002 (BUMN, 2002)

Paired T-Test

A paired t-test can be a statistical method commonly accustomed when compares the pre and post-interference situation with identical- related objects. The samples must consist of two matching data pairs, two-time points (before and after), and two customarily distributed measurements that compulsarily meet several needs to use this statistical technique. This analysis and situation study method fulfilled all the requirements for conducting a different test or t-test. There were two samples of relevant data from the analysis of financial ratios and intervention situation of implementing 35,000-MW Fast Track Program in 2016. The conditions of before-and-after-the program were compared, and their significance differences were measured.

The null hypothesis and alternative hypotheses were employed for paired t-tests. The null hypothesis always has the same assumptions. There will be two different cases for alternative hypotheses. The null hypothesis gives an assumption between paired sample data to be zero. Instead, the alternative hypothesis concludes that the average differences between the two data samples are not zero. The first case is a two-sided hypothesis in which the direction of the differences is not too significant. Otherwise, the upper and lower tail are used to increase the strength of the test.

The variable of this study was an independent variable, namely Financial Performance in the period of before and after the implementation of the 35,000-Mega Watt Fast Track Program. The hypothesis used was descriptive hypothesis. There were two choices possibly made by the author according to the basis of the theory used. They are:

- H₀ = There is no significant difference in Financial Performance in the period of before and after the implementation of the 35,000-Mega Watt Fast Track Program.
- H_a = There is a significant difference in Financial Performance in the period of before and after the implementation of the 35,000-Mega Watt Fast Track Program.

The initial hypothesis (H₀) in the T-test will show conditions that there is no real change in the company's financial performance, even though there is a government policy to prioritize the use of non-fossil fuel rather than coal as a primary energy source. Therefore, the alternate hypotheses (H_a) are as follow:

- H₁ is Using Return on Equity, there is a significant difference in Financial Performance in the period of before and after the implementation of the 35,000-Mega Watt Fast Track Program.
- H₂ is Using Return on Investment, and there is a significant difference in Financial Performance in the period before and after the implementation of the 35,000-Mega Watt Fast Track Program.

- H₃ is using Cash Ratio; there is a significant difference in Financial Performance in the period before and after the implementation of the 35,000-Mega Watt Fast Track Program.
- H₄ is using Current Ratio, there is a significant difference in Financial Performance in the period before and after the implementation of the 35,000-Mega Watt Fast Track Program.
- H₅ is using Collection Period, there is a significant difference in Financial Performance in the period of before and after the implementation of the 35,000-Mega Watt Fast Track Program.
- Activity Ratio
- H₆ is using Inventory Turnover, there is a significant difference in Financial Performance in the period before and after the implementation of the 35,000-Mega Watt Fast Track Program.
- H₇ is using Total Asset Turnover, there is a significant difference in Financial Performance in the period before and after the implementation of the 35,000-Mega Watt Fast Track Program.
- Solvency Ratio
- H₈ is using Total Equity to Total Asset, there is a significant difference in Financial Performance in the period before and after the implementation of the 35,000-Mega Watt Fast Track Program.

RESULTS AND DISCUSSION

Profitability Analysis

Returns on the equity in Table 2 shows a comparison of the percentage value of return on investment of the three companies from the period before and after the implementation of the 35,000-Mega Watt Fast Track Program in 2013-2018. Returns on the equity chart showed different appearances for the ten lines of the company chart. Atlas Resources underwent a dramatic percentage decrease before and until the implementation of 35,000-MW Fast Track program from 2016 to 2018, with the peak reduction was 241% in 2018 from 2017. It caused the infrastructure improvements resulting in high cost increases and lower profits at the end of the year. Meanwhile, Adaro, Baramulti, Mitrabara, Recource Alam, and Bukit Asam had a downward percentage trend after the 35,000-MW Fast Track program in 2016 from 2015, but they could rise again in 2017 and undergo down again by an average of approximately 7% in 2018. Toba had a decline in 2016 but rose again in 2017 and 2018. On the other hand, Bayan, Delta, and Indo Tambangraya increased from 2015 to 2018.

Table 2. Return of Equity

ROE	2013	2014	2015	2016	2017	2018
Adaro Energy	0,0731	0,0563	0,0450	0,0900	0,1311	0,1110
Atlas Resources	-0,0816	-0,2293	-0,3161	-0,4529	-0,4204	-2,8298
Toba Bara Sejahtra	0,2652	0,2515	0,1658	0,0987	0,2367	0,3158
Baramulti Suksessarana	0,0540	0,0291	0,2513	0,2153	0,5525	0,4596
Mitrabara Adiperdana	0,2014	0,3016	0,4694	0,2959	0,4794	0,4051
Bayan Resources	-0,1227	0,7397	-0,4751	0,0957	0,6556	0,7998
Resource Alam Indonesia	0,2350	0,1108	0,0739	0,1122	0,1517	0,0055
Delta Dunia Makmur	-0,4293	0,1683	-0,0977	0,2933	0,2639	0,2893
Indo Tambangraya Megah	0,2281	0,2228	0,0756	0,1440	0,2637	0,2668
Bukit Asam (Persero)	0,2455	0,2329	0,2193	0,1918	0,3295	0,3148

Source: (<https://ticmi.co.id/dataemiten/ED/fr>, Financial Statements 2013 - 2018)

Table 3 shows an exciting trend of the line after the implementation of the 35,000-MW Fast Track Program, and shows quite different results from the ROE. Furthermore, Return on Investment shows a different appearance for 10 line chart companies. Adaro, Atlas, Bayan, Alam, Delta, and Indo Tambangraya showed a percentage increase from 2015 to 2016. Meanwhile, Toba, Baramulti, Mitrabara, and Asam Asam had a percentage decline. Mitrabara experienced a dramatic decrease of 23% from 2015 to 2016. However, over time, there were only Toba, Bayan, and Bukit Asam that showed a percentage increase from 2016 to 2018. Meanwhile, the other seven companies showed a continuous decline from 2013 to 2018.

Table 3. Return of Investment

ROI	2013	2014	2015	2016	2017	2018
Adaro Energy	0,1069	0,0969	0,0911	0,1295	0,1895	0,1694
Atlas Resources	-0,0660	-0,1220	-0,1217	-0,1049	-0,0218	-0,2136
Toba Bara Sejahtra	0,3318	0,2908	0,2115	0,1708	0,2367	0,2711
Baramulti Suksessarana	0,1173	0,0938	0,3538	0,3190	0,7612	0,5894

Mitrabara Adiperdana	0,4580	0,4524	0,6749	0,4411	0,6627	0,5519
Bayan Resources	-0,0103	-0,2264	-0,0306	0,0145	0,7789	0,9760
Resource Alam Indonesia	0,3420	0,1889	0,1318	0,1832	0,2265	0,0290
Delta Dunia Makmur	0,1203	0,1704	0,1242	0,2294	0,2679	0,2654
Indo Tambangraya Megah	0,3760	0,3408	0,2149	0,2519	0,3984	0,3964
Bukit Asam (Persero)	0,2709	0,2519	0,2504	0,2261	0,3790	0,3865

Source: (<https://ticmi.co.id/dataemiten/ED/fr>, Financial Statements 2013 - 2018)

The profitability ratio was also influenced by the coal price reference trend which was quite volatile. When the prices fell in 2015, the demand for coal declined. The demand continued to affect the volume of sales which declined. A decrease in sales volume and cost of goods sold that was not proportional to the decrease in sales volume reduced the company's profit level. One example was presented by Adaro chart in 2015 when coal prices were at the lowest point and there was a decrease in the demand in which the sales volume fell from 57 million tons in 2014 to 53.1 tons in 2015. When the prices increased in 2018, PT Toba Bara Sejahtera Tbk's domestic coal production volume in 2018 increased 8.0% more than that in 2017. Furthermore, it affected coal sales volume in 2018 as of 2.1% more than that in 2017. This affected ROE and ROI that were higher in 2018 than that in 2017.

In brief, there were signs of different conditions from implementing this program for the ten coal companies. Furthermore, there were different condition marks from this program's implementation for the ten companies in which Atlas and Mitrabara experienced significant drops. Meanwhile, it was only Bayan that could stably generate its profits used and firm performance.

Liquidity Ratio

Cash ratio, current ratio, and collection period are tools to measure liquidity performance. These ratios will estimate the company's ability to pay its debt from the composition of cash, current assets, and sales revenue. The comparison aims to determine whether an influence on company liquidity existed before and after the implementation of the 35,000-MW Fast Track Program in 2013-2018.

Table 4. Cash Ratio

Cash Ratio	2013	2014	2015	2016	2017	2018
Adaro Energy	0,8801	0,9621	1,5456	1,6708	1,5606	1,1365
Atlas Resources	0,0108	0,0286	0,0329	0,0080	0,0251	0,0068
Toba Bara Sejahtera	0,4352	0,5278	0,6605	0,5155	0,8810	0,4949
Baramulti Suksessarana	0,0124	0,0824	0,2608	0,2482	0,3405	0,2413
Mitrabara Adiperdana	0,1990	0,3324	0,5965	1,8326	2,0408	1,3271
Bayan Resources	0,4204	0,1544	0,6046	0,6793	0,1939	0,5770
Resource Alam Indonesia	0,3065	0,1124	0,3861	1,3553	1,5858	0,1798
Delta Dunia Makmur	0,7176	0,5908	0,6888	0,3052	0,3091	0,2389
Indo Tambangraya Megah	0,7706	0,6209	0,9419	1,3737	1,1427	0,9444
Bukit Asam (Persero)	1,4790	1,1301	0,6328	0,7287	0,8087	1,2767

Source: (<https://ticmi.co.id/dataemiten/ED/fr>, Financial Statements 2013 - 2018)

Table 4 shows that cash ratio decrease for Atlas, Toba, Baramulti, and Delta before the implementation of the program in 2015 and after the implementation of the program in 2016. Meanwhile, the other six companies experienced a percentage increase in 2016 from 2015. The percentage tended to be unstable. In 2017 the rates of six companies increased while those of the other four companies decrease. Furthermore, in 2018 almost all companies except Bayan had declined. The ten coal companies experienced an unstable trend pattern, but on average, they had a definite increase in 2017 and a decrease in 2018.

Table 5. Current Ratio

Current Ratio	2013	2014	2015	2016	2017	2018
Adaro Energy	1,7719	1,6417	2,4039	2,4710	2,5594	1,9601
Atlas Resources	0,2428	0,3285	0,2050	0,1772	0,2305	0,2342
Toba Bara Sejahtra	0,8951	1,2412	1,3995	0,9678	1,5256	1,2241
Baramulti Suksessarana	0,4939	0,6704	0,8352	1,1081	1,4491	1,2150
Mitrabara Adiperdana	0,7161	1,3988	2,0731	3,4488	3,1625	2,6379
Bayan Resources	1,0989	0,6231	1,8854	2,5461	1,0241	1,2372
Resource Alam Indonesia	1,7349	1,6858	2,2195	4,0509	3,5405	1,4782
Delta Dunia Makmur	1,4066	2,3753	3,0025	1,3647	1,5889	1,5843
Indo Tambangraya Megah	1,6190	1,5640	1,8018	2,2568	2,4335	1,9658
Bukit Asam (Persero)	2,8659	2,0751	1,5435	1,6558	2,5287	2,3785

Source: (<https://ticmi.co.id/dataemiten/ED/fr>, Financial Statements 2013 - 2018)

Table 5 shows that the current ratio of Adaro, Atlas, Toba, Baramulti, Mitrabara, Bayan, Alam, Delta, Indo Tambangraya, and Bukit Asam. This current ratio condition is almost similar to the cash ratio condition. Some companies such as Atlas, Toba, and Delta experienced a decrease in the current ratio, before the implementation of the program in 2015 and after the implementation of the program in 2016. Meanwhile, the other seven companies experienced a percentage increase in 2016 from 2015. The percentages of all companies tend to fluctuate from 2013 to 2018 continuously. Of the ten coal companies, Atlas and Bukit Asam had the most stable current ratios, although they experienced ups and downs, which were not too drastic. The companies experienced an unstable trend pattern, but on average, they increased in 2017 and decreased in 2018.

Table 6. Collection Period Ratio

Collection Period (Days)	2013	2014	2015	2016	2017	2018
Adaro Energy	35	32	27	44	36	38
Atlas Resources	34	159	222	476	259	313
Toba Bara Sejahtra	21	13	28	18	14	27
Baramulti Suksessarana	33	41	68	53	82	44
Mitrabara Adiperdana	1	2	58	48	24	41
Bayan Resources	20	23	44	40	30	22
Resource Alam Indonesia	20	15	30	24	26	23
Delta Dunia Makmur	77	87	90	87	85	94
Indo Tambangraya Megah	32	35	27	35	42	43
Bukit Asam (Persero)	46	40	42	59	100	48

Source: (<https://ticmi.co.id/dataemiten/ED/fr>, Financial Statements 2013 - 2018)

Table 6 shows that the collection period representing the ability of the ten coal mining companies to collect receivables accounts or depend on their credit policies. This ratio is different from the previous ratio, in which the higher the percentage values are, the better they are. On the contrary, the smaller the percentage values of the collection period are, the better they are. The lower numbers showed the ability of the companies to collect quickly. Thus, the smaller the number was, the faster the company could receive. Atlas always had the highest value, followed by Delta, and the number of other costs was relatively stable in the range of 20-40 days. Atlas was always in the range of hundreds of days, while Delta was always in the range of fifty days and above. This chart vividly revealed that the average number of days required for the collection was more after implementing the program than before applying for the program. The number of days in this ratio showed how long the company would get paid receivable accounts. The companies preferred fewer number of days because they could use it efficiently to pay off short-term debt.

In brief, the ten coal companies sufficiently could meet financial needs (financial) in the short term or years after the implementation of the program from 2016 to 2018. However, Atlas had the highest collection period value compared to the other nine companies. It had enough cash to meet their financial needs in the short term

Activity Ratio

Inventory Turnover and Total Asset Turnover are used to measure the efficiency of a company related to its assets and inventory in generating sales. The calculations of these ratios are shown in Figure 3-6 and Figure 3-7. The figures were employed to

measure and compare the performances of ten private and state-owned coal companies' activities during the implementation of the 35,000-MW Fast Track Program and to evaluate their influences in the industry before and after the program conditions were implemented.

Table 7. Inventory Turnover (Days)

Inventory Turnover (Days)	2013	2014	2015	2016	2017	2018
Adaro Energy	11	11	10	11	10	11
Atlas Resources	33	31	76	107	59	59
Toba Bara Sejahtra	28	31	23	22	29	41
Baramulti Suksessarana	37	15	9	8	5	13
Mitrabara Adiperdana	31	39	22	19	30	32
Bayan Resources	48	37	71	29	29	26
Resource Alam Indonesia	18	23	21	32	24	71
Delta Dunia Makmur	15	14	13	11	14	14
Indo Tambangraya Megah	20	28	27	17	23	20
Bukit Asam (Persero)	29	29	33	29	22	27

Source: (<https://ticmi.co.id/dataemiten/ED/fr>, Financial Statements 2013 - 2018)

Table 7 shows that inventory turnover of ten companies with a ratio of total inventory to total sales in units of days. The ten companies performed relatively balanced results with a tendency to decrease in number after 2016 as a starting point for the 35,000-MW Fast Track Program. A sudden increase occurred in Atlas from 76 days in 2015 to 107 days in 2016, but then it fell sharply in 2017 for 59 days. There was a drastic decrease in Bayan from 71 days in 2015 to 29 days in 2016. The trends of the other eight companies were relatively stable, although there were changes in increase or decrease in days. However, the differences were not very significant. The program did not significantly affect the performance of the company's activities with respect to the inventory turnover when viewed on an average of the ten companies.

Table 8. Total Asset Turnover Ratio

Total Asset Turnover (%)	2013	2014	2015	2016	2017	2018
Adaro Energy	55	59	49	43	54	58
Atlas Resources	79	20	18	9	18	31
Toba Bara Sejahtra	254	238	163	137	110	114
Baramulti Suksessarana	182	200	219	180	252	260
Mitrabara Adiperdana	529	264	288	199	204	195
Bayan Resources	101	129	59	75	182	222
Resource Alam Indonesia	248	179	137	104	89	58
Delta Dunia Makmur	89	78	78	92	105	99
Indo Tambangraya Megah	229	206	178	141	164	191
Bukit Asam (Persero)	119	116	116	104	111	110

Source: (<https://ticmi.co.id/dataemiten/ED/fr>, Financial Statements 2013 - 2018)

Another ratio employed to assess activity ratios is the total asset turnover. This ratio is applied to evaluate a company's ability to use its assets to make sales. Figure 3-7 provides information on the total asset turnover of the ten private and state-owned coal companies for six-year periods before and after the implementation of the 35,000-MW Fast Track Program. The impact was a downward trend in the percentages of almost all coal companies analyzed. There were only two companies that experienced an increase in 2016 when implementing the program, they were Bayan for 75% and Delta for 92%. However, in 2017 eight companies underwent increases while two companies experienced decreases. The overall value was generally above the standard score of 100%. It indicated that all companies well managed their assets to produce sales, although some companies were below the standard.

Solvency Ratio

Table 9. Total Equity to Total Asset Ratio

Total Equity to Total Asset	2013	2014	2015	2016	2017	2018
Adaro Energy	0,4740	0,5080	0,5627	0,5805	0,6005	0,6094
Atlas Resources	0,4188	0,3165	0,2333	0,1704	0,1216	0,0285
Toba Bara Sejahtra	0,4187	0,4735	0,5493	0,5648	0,5018	0,4296
Baramulti Suksessarana	0,5510	0,5216	0,6036	0,6922	0,7133	0,6131
Mitrabara Adiperdana	0,2643	0,5743	0,6765	0,7874	0,7607	0,7157
Bayan Resources	0,2871	0,2200	0,1836	0,2281	0,5801	0,5892
Resource Alam Indonesia	0,6914	0,7251	0,7790	0,8551	0,8436	0,7394
Delta Dunia Makmur	0,0632	0,1015	0,1022	0,1433	0,1874	0,2209
Indo Tambangraya Megah	0,6772	0,6874	0,7082	0,7501	0,7052	0,6722
Bukit Asam (Persero)	0,6467	0,5854	0,5498	0,5680	0,6276	0,6731

Source: (<https://ticmi.co.id/dataemiten/ED/fr>, Financial Statements 2013 - 2018)

Total Equity to Total Assets are used to measure solvency performance, as shown in Table 9. Overall results show a moderate decline for all companies. The movements of the ten coal companies analyzed resulted in varying percentages, but the ups and downs of the movements were not too dramatic and dramatic. There are two companies whose movements are rather drastic, namely Atlas and Bayan. Atlas experienced a dramatic decline from 2013 to 2018 with reaching its lowest point in 2018 of 3%. On the other hand, Bayan experienced a dramatic increase from 2016 to 2018, with the highest point of 59%. Eight other companies show reasonably consistent results on the ups and downs of the percentage. This ratio is used to measure the company's ability to pay all of its obligations, both short term and long term, if the company is liquidated (liquidated). The higher the ratio, the greater the company's liabilities.

Health Assessment Evaluation

Evaluation of the company's health assessment is based on SOE Minister's decision No. KEP-100 / MBU / 2002 to strengthen the analysis of the differences between the years before and after the implementation of the 35,000-MW Fast Track Program, both in private companies and state-owned companies in coal mining business. The total score and total weight will be determined from the value of eight financial ratios that were calculated earlier using the score table provided within the decision. The level and category of the company's health will then be known from the score.

Table 10. Assessment Score of PT Toba Bara Sejahtra Tbk

PT Toba Bara Sejahtra Tbk						
Period	Year	Total Score	Total Weight	Value	Level	Category
Before	2013	61,5	88	80<TS<=95	AA	Healthy
	2014	64,9	93	80<TS<=95	AA	Healthy
	2015	66	94	80<TS<=95	AA	Healthy
After	2016	54,5	78	65<TS<=80	A	Healthy
	2017	64,9	93	80<TS<=95	AA	Healthy
	2018	67	96	TS<=95	AAA	Healthy

Source: (Author analysis, 2020)

Table 11. Assessment Score of PT Mitrabara Adiperdana Tbk

PT Mitrabara Adiperdana Tbk						
Period	Year	Total Score	Total Weight	Value	Level	Category
Before	2013	55,35	79	65<TS<=80	A	Healthy
	2014	61,1	87	80<TS<=95	AA	Healthy
	2015	66,5	95	80<TS<=95	AA	Healthy
After	2016	65,5	94	80<TS<=95	AA	Healthy
	2017	65	94	80<TS<=95	AA	Healthy
	2018	67	96	TS<=95	AAA	Healthy

Source: (Author analysis, 2020)

Table 12. Assessment Score of PT Indo Tambangraya Megah Tbk

PT Indo Tambangraya Megah Tbk						
Period	Year	Total Score	Total Weight	Value	Level	Category
Before	2013	66	94	80<TS<=95	AA	Healthy
	2014	67	96	TS<=95	AAA	Healthy
	2015	57,5	82	80<TS<=95	AA	Healthy
After	2016	61,5	88	80<TS<=95	AA	Healthy
	2017	64,5	92	80<TS<=95	AA	Healthy
	2018	65	93	80<TS<=95	AA	Healthy

Source: (Author analysis, 2020)

Table 13. Assessment Score of PT Bukit Asam (Persero) Tbk

PT Bukit Asam (Persero) Tbk						
Period	Year	Total Score	Total Weight	Value	Level	Category
Before	2013	66,5	95	80<TS<=95	AA	Healthy
	2014	67	96	TS<=95	AAA	Healthy
	2015	68	97	TS<=95	AAA	Healthy
After	2016	66,5	95	80<TS<=95	AA	Healthy
	2017	66	94	80<TS<=95	AA	Healthy
	2018	66,5	95	80<TS<=95	AA	Healthy

Source: (Author analysis, 2020)

Table 10-13 shows that the level of health of Toba, Mitrabara, Indo Tambangraya, and Bukit Asam with the comparison between the period before and after the implementation of the 35,000-MW Fast Track Program. There were no substantial differences in the total score of the company before and after the program was started. Therefore it can be said that the 35,000-MW Fast Track Program was not given a significant impact on the company's level of healthiness because the average total weight from 2013 to 2018 was above 90.

Table 14. Assessment Score of PT Adaro Energy Tbk

PT Adaro Energy Tbk						
Period	Year	Total Score	Total Weight	Value	Level	Category
Before	2013	47,9	68	65<TS<=80	A	Healthy
	2014	43,9	63	50<TS<=65	BBB	Less Healthy
	2015	41,9	60	50<TS<=65	BBB	Less Healthy
After	2016	54,2	75	65<TS<=80	A	Healthy
	2017	61,4	88	80<TS<=95	AA	Healthy
	2018	57,4	82	80<TS<=95	AA	Healthy

Source: (Author analysis, 2020)

Table 15. Assessment Score of PT Baramulti Suksessarana Tbk

PT Baramulti Suksessarana Tbk						
Period	Year	Total Score	Total Weight	Value	Level	Category
Before	2013	39	56	50<TS<=65	BBB	Less Healthy
	2014	34,9	50	50<TS<=65	BBB	Less Healthy
	2015	58,8	84	80<TS<=95	AA	Healthy
After	2016	61,3	88	80<TS<=95	AA	Healthy
	2017	62,7	90	80<TS<=95	AA	Healthy
	2018	62,4	89	80<TS<=95	AA	Healthy

Source: (Author analysis, 2020)

Table 16. Assessment Score of PT Bayan Resources Tbk

PT Bayan Resources Tbk						
Period	Year	Total Score	Total Weight	Value	Level	Category
Before	2013	28,74	41	40<TS<=50	BB	Less Healthy
	2014	42,75	61	50<TS<=65	BBB	Less Healthy
	2015	32	46	40<TS<=50	BB	Less Healthy
After	2016	47,25	68	65<TS<=80	A	Healthy
	2017	61,5	88	80<TS<=95	AA	Healthy
	2018	65	93	80<TS<=95	AA	Healthy

Source: (Author analysis, 2020)

Table 17. Assessment Score of PT Delta Dunia Makmur Tbk

PT Delta Dunia Makmur Tbk						
Period	Year	Total Score	Total Weight	Value	Level	Category
Before	2013	37,5	54	50<TS<=65	BBB	Less Healthy
	2014	61,9	88	80<TS<=95	AA	Healthy
	2015	38,9	56	50<TS<=65	BBB	Less Healthy
After	2016	62,4	89	80<TS<=95	AA	Healthy
	2017	62,4	89	80<TS<=95	AA	Healthy
	2018	62,65	90	80<TS<=95	AA	Healthy

Source: (Author analysis, 2020)

Table 14-17 shows about The category of health level of Adaro, Baramulti, Bayan, and Delta is presented in Figure 3-5 to Figure 3-8. The figures show significant changes in the total weight of the company affecting their category level. The companies' scores had improved from the bottom from 2016 to 2018; hence they got a AA Level with above 'Healthy' category.

Table 18. Assessment Score of PT Atlas Resources Tbk

PT Atlas Resources Tbk						
Period	Year	Total Score	Total Weight	Value	Level	Category
Before	2013	22	31	30<TS<=40	B	Less Healthy
	2014	22,5	32	30<TS<=40	B	Less Healthy
	2015	17,75	25	20<TS<=30	CCC	Not Healthy
After	2016	16,5	24	20<TS<=30	CCC	Not Healthy
	2017	17	24	20<TS<=30	CCC	Not Healthy
	2018	15,5	22	20<TS<=30	CCC	Not Healthy

Source: (Author analysis, 2020)

Table 19. Assessment Score of PT Resource Alam Indonesia Tbk

PT Resource Alam Indonesia Tbk						
Period	Year	Total Score	Total Weight	Value	Level	Category
Before	2013	64	91	80<TS<=95	AA	Healthy
	2014	54,4	78	65<TS<=80	BBB	Less Healthy
	2015	50,5	72	65<TS<=80	BBB	Less Healthy
After	2016	56,5	81	80<TS<=95	AA	Healthy
	2017	63	90	80<TS<=95	AA	Healthy
	2018	35	50	40<TS<=50	BB	Less Healthy

Source: (Author analysis, 2020)

Table 18-19 shows about The category of health levels of Atlas and Alam are presented in Figure 3-9 to Figure 3-10. The figures show dramatic changes in the companies' total weight affecting their category level. Atlas' score had dropped to the bottom from 2015 to 2018 with the lowest total weight as 22; hence it got a CCC Level with under 'Not Healthy' category. Alam's score

improved from the bottom in 2016, but dropped to the bottom in 2018 with the lowest total weight was 50; therefore, it got a BB Level with under ‘Less Healthy’ category.

Paired T-Test Analysis

This study employed one statistical analysis tool called the t-test method. This method employed two paired samples for pre and post-studies. Calculations were performed in Microsoft Excel 2019 and SPSS by using the Data Analysis Menu and the t-Test analysis tool: Paired Two Sample for Means. Table 3.11 shows the mean values, standard deviation, p values, and the decision of results to take. The p-values were essential factors in determining whether alternative hypotheses were accepted or rejected. Besides, the p-value indicated whether significant differences in the eight financial ratios before and after the implementation of the 35,000-MW Fast Track Program existed. These ratios were presented and divided into two periods, before and after, as a correlation with the pre and post-study methods. Mean values were employed to investigate one of two periods, before or after, that had higher values to understand its impact better. Alfa applied 0.10 values, of which the certainty was 90% of the results. If the p-value is below alpha, lower than or equal to 0.10, the hypothesis is accepted. On the other hand, if the p-value is higher than alpha, the hypothesis is rejected.

Table 20 shows the mean values, standard deviation, p values, and the decision of results to take. The p-values were essential factors in determining whether alternative hypotheses were accepted or rejected. Besides, the p-value indicated whether significant differences in the eight financial ratios before and after the implementation of the 35,000-MW Fast Track Program existed. These ratios were presented and divided into two periods, before and after, as a correlation with the pre and post-study methods. Mean values were employed to investigate one of two periods, before or after, that had higher values to understand its impact better. Alfa applied 0.10 values, of which the certainty was 90% of the results. If the p-value is below alpha, lower than or equal to 0.10, the hypothesis is accepted. On the other hand, if the p-value is higher than alpha, the hypothesis is rejected.

Table 20. Paired t-test Result

No.	Description	Mean		Standard Deviation		Paired Sample t-test	Decision
		Before	After	Before	After		
1	ROE	0,0988	0,1289	0,1632	0,4969	-0,231	Accept the first hypothesis (H1)
2	ROI	0,1828	0,3054	0,1876	0,2204	-1,679	Accept the first hypothesis (H2)
3	Cash Ratio	0,5375	0,801	0,3768	0,5569	-1,685	Accept the first hypothesis (H3)
4	Current Ratio	1,4606	1,8668	0,6501	0,8788	-1,917	Reject the first hypothesis (H4)
5	Collection Period (Days)	46,7349	75,8789	37,4643	98,4345	-1,429	Accept the first hypothesis (H5)
6	Inventory Turnover (Days)	27,7481	28,0923	13,1755	19,4221	-0,064	Accept the first hypothesis (H6)
7	Total Asset Turnover	155,923	123,708	97,5007	65,5395	1,457	Accept the first hypothesis (H7)
8	Total Equity to Total Asset	0,4718	0,5424	0,2023	0,2353	-1,723	Accept the first hypothesis (H8)

Source: (Author analysis, 2020)

Based on SPSS based on The ROE data revealed the statistic value of t-test = -0.231 with a real level of 10% and degree of freedom $n - 1 = 10 - 1 = 9$, and obtained t value of the statistical table $t_{\alpha/2, n-1} = t_{0.05, 9} = 1.833$ (interval $-1.833 < t\text{-test} < 1.833$). Therefore, because of $t\text{ value} < t_{0.05, 9}$ ($0.231 < 1.833$), H1 was accepted. Furthermore, the other ratios, such as ROI, Cash Ratio, Collection Period, Inventory Turnover, Total Asset Turnover, and Total Equity to Total Asset obtained statistic values of paired t-test < 1.833 , and thus, H2, H3, H5, H6, H7, and H8 were accepted. However, H4 was rejected because $t\text{-test} > 1.833$ ($1.917 > 1.833$).

It can be concluded that there are no differences among the ROE, ROI, Cash Ratio, Collection Period, Inventory Turnover, Total Asset Turnover, and Total Equity to Total Asset of the coal mining companies before and after the implementation. Furthermore, profitability, liquidity, activity, and solvency ratios are not influenced by the implementation of the 35,000-MW Fast Track Program concerning statistical results, except for the current ratio.

Market Goal Analysis of The Ten Coal Mining Companies After The Implementation Program 35,000 MW

In 2016, there was a decline in the export market demand. Therefore, Indonesian coal producers glanced at the potential increase in the domestic market demand. Coal companies took an advantage of the national electricity development acceleration program of 35,000 MW offered by the government. Coal companies perceived twice more potential opportunities to increase domestic coal consumption if all Electric Steam Power Plants operated. The construction of the Electric Steam Power Plant would create

definite demand for coal companies and encourage the growth of its mining and logistics services business. This would ensure stable income and good returns while minimizing the impact of volatility from the coal sector cycle.

After the implementation of the 35,000 MW Program, in 2018 PT Adaro Energy Tbk. had total domestic coal sales of Indonesia for 6 Mt year-on-year from a total production volume of 54.39 Mt in which increased for 5% y-o-y. Around 48 Mt of coal was exported to China, India, etc. PT Adaro Energy Tbk is a member of the consortium in the construction of the 200 MW Tanjung Electric Steam Power Plant. The company believes that Indonesian market will be the main target of Indonesian miners because of massive Electric Steam Power Plant development. Furthermore, the company utilizes an integrated business model throughout the coal, energy, utilities, and supporting infrastructure sectors. This business model supports the company's cost aspects while opening opportunities to capture optimal margins across all business pillars. Meanwhile, PT Atlas Resources Tbk. has an agreement to supply low-calorie thermal coal to meet the needs of power plants for the domestic market, particularly in West Java and Sumatra. The company's market share in 2018 was dominated by domestic customers by 68.43%, and the rest of its market was export market to Malaysia and India. In 2018 the domestic coal production volume of PT Toba Bara Sejahtera Tbk. increased for 8.0% more than that in 2017, and in 2018 it affected the coal sales volume for 2.1% more than that in 2017. Through the IPP scheme, on July 14, 2016, the company succeeded to get a Steam Power Plant project from PLN located in Gorontalo Province, Sulawesi with a capacity of 100 MW (Sulbagut-1). In 2018 PT Baramulti Suksessarana Tbk. succeeded to maintain sustainable growth by continuing developing production and sales of low-calorie coal for 3,700 kcals/kgs for the Indian and Chinese markets. In 2018 the government policy through the 35,000-MW program increased the domestic sales for more than 42% of the total sales volume compared to the achievement in 2017 that was for 30.23%. The company exceeded the DMO requirement for at least 25% of the total production volume. The strategies of these approaches strengthened and maintained firm foundation of sustainable growth achievement.

On December 27, 2018 one of PT Mitrabara Adiperdana Tbk's strategies to increase the source of coal reserves was to increase the company's share ownership in PT Duta Bara Utama from 13.33% to 26%. This increase aimed to market PT Duta Bara Utama coal which had unique specifications in the domestic market shares and export activities. Until the end of 2018, with the government's 35,000-MW program, the company's total production volume was 3.6 million tons which indicated a decrease for 7.7% compared to 3.9 million tons in the end of 2017. However, the company's sales volume remained relatively unchanged in 2018 compared to that in 2017. Mitrabara Markets were India at 31% of total sales, then the Philippines at 17%, China at 17%, South Korea at 11%, and the domestic market in Indonesia at 24%. PT Bayan Resources Tbk. had a total sales volume of 28.3 million MT in 2018. The expansion and development of Tabang project was the focus of Bayan in 2018. By the end of 2018, Bayan obtained domestic sales of US \$ 199 million from total revenues of US \$ 1.6 billion through the government's 35,000-MW program.

Sales in the Indonesian domestic market had increased by USD \$ 89 million from 2017 to 2018. The export market had still dominated the company's sales from 2017 to 2018. In 2018 PT Resource Alam Indonesia Tbk. still focused on selling coal to export markets such as Korea at 49% of total sales volume in 2018, India at 38%, and China at 8%. Meanwhile, in 2019 the company's production and sales target were 4 million Mt with Indonesia's domestic market target was 1 million Mt or the DMO target was 25%. In order to achieve the targets, the company sought to increase the capacity of heavy equipment and all infrastructures to be more complete and adequate, added new production from several blocks, increased sales to the domestic market, and made adjustments to stripping ratios. Because of infrastructure development, the ratio of return on equity and return on investment had decreased from 2016 to 2018.

The 35,000-MW program had not brought effects for PT Delta Dunia Makmur Tbk. and PT Indo Tambangraya Megah Tbk. from 2016 to 2018 because the sales volume trends tended to be stable from year to year and there was no significant increase or decrease. Meanwhile, PT Bukit Asam (Persero) Tbk., one of the State-Owned Enterprises in Indonesia, had implemented a marketing strategy for the domestic market by optimizing domestic sales to the PLN Groups and non-PLN Groups throughout 2018. With the strategy for the global market, the company sold high calories (GAR 6100) to the Japan, Philippines, and Taiwan markets. Most sales took a form of long-term sales contracts without leaving the spot market. The sale price referred to the international thermal coal market prices and the price standard agreed upon. In order to guarantee the continuity of revenue, the company enforced long-term contracts with major customers which consisted of clauses possibly reviewed periodically according to the development and agreement of both parties. The average coal selling prices used in the transaction was to follow the volatility of the selling price in the market which reflected the condition of the global economy. Furthermore, Bukit Asam provided guidance in optimizing domestic market opportunities, especially in welcoming and implementing government's programs to provide 35,000 MW-electricity. In 2018 PT Bukit Asam (Persero) Tbk. began the construction of Electric Steam Power Plant in the mouth of South Sumatra for 8 mines with the capacity was 1,200 MW.

The 2016 data of the Ministry of Energy and Mineral Resources showed that from January to June 2016 coal demands in Indonesia had reached 25.52 million tons, or 8% more than that in the same period in 2015 (23.58 million tons). The increase of coal consumption in the domestic market was because most of the Electric Steam Power Plants originated from the 35,000-MW program had started to operate. The Electric Steam Power Plants included the Celukan Bawang Electric Steam Power Plant and the Cilacap Extension Electric Steam Power Plant. Beside for the electricity demand, the increase in coal demand came from the cement industries which increased due to massively new infrastructure projects in Indonesia. In 2018 coal production surged to 548.6 million tons, or increased for 19% compared to the volume of production in 2017. 78.2% of Indonesia's coal production was exported while the domestic market absorbed 21.8%. The International Energy Agency (IEA, 2018) reported that there would have been an additional 10 GW of new ultra-supercritical power plant capacity from 2019 to 2023. This was in line with the government's 35,000-MW program to meet growing electricity demands to support annual economic growth that was

expected to reach 6.5% until 2023. In long term project, PLN has estimated that electricity demand will reach 433 TWh until 2027, or will increase by 6.9% from 2018.

After the implementation of the 35,000 MW program, PLN's electricity supply was still dominated by coal. Non-fossil energy is still 50% below coal production capacity. Table 21 shows power generation capacity after the implementation program 35,000 MW during 2016 until 2018 based on the type of energy source.

Table 21. Power Generation Capacity

Energy Source	Year (in Mega Watt)					
	2015	2016	2017	2018	Total	
Coal	17,404	17,986	18,505	18,784	72,679	
Renewable Energy:						
Hybrid	4	4	4	4		
Wind	2	2	2	144		
Solar	33	43	51	60		
Bioenergy	1,742	1,783	1,857	1,883		
Geothermal	1,438	1,533	1,808	1,948		
Water	5,228	5,621	5,658	5,742		
Total Renewable Energy	8,446	8,986	9,379	9,781		36,593

Source: Electricity Statistics 2018 (Ministry of Energy and Mineral Resources, 2019)

The program 35,000 MW has still coal-oriented while compared to the capacity of non-fossil energy which is 50% below coal. Although coal still dominates primary energy sources, coal companies must continue to try to increase production and revenue. In order to increase coal production and revenue, almost all projects require additional investment to capture the new 35,000 MW coal markets. However, the limited coal reserves in Indonesia create a concern for the Power Plant Developer to possibly support their electricity production activities. In addition, exploration activities are very low due to high exploration costs. Consequently, coal mining companies are reluctant to carry out during the financial crisis due to falling commodity prices. Furthermore, selling price determination of coal for Steam Power Plant must be right in order to provide long-term investment. Coal producers have been experiencing problems related to policies/regulations requiring them to pay Non-Tax State Revenues that burden them due to the existence of Article 22 regulating Income Tax levies 1.5% of the total purchase of raw coal.

LIMITATION

The limitation of this study was insufficient time to collect the primary data of the companies analyzed. This study employed data published on the Indonesia Stock Exchange (secondary data). The data is not census of coal mining companies, as there are twenty two coal mining companies listed on the Indonesian Stock Exchange. This study only considered the financial aspects of SOE Ministerial Decree No. KEP-100/MBU/ 2002 to evaluate financial performance by using profitability, solvency, liquidity and activity ratios. Furthermore, this study employed a paired t-test to compare before and after the phenomena that occurred. The t-test was only limited to financial ratios. Other aspects outside the financial aspects such as Operations and Marketing were not included in this study. This study only focused on investigating coal companies in Indonesia. The research period only covered the financial years from 2013 to 2018, and did not cover alternative energy other than coal.

CONCLUSION AND RECOMMENDATIONS

Based on the evaluation of financial ratio analysis, health assessment level, and paired t-test measurement in the period of before and after the implementation of the 35,000-MW Fast Track Program in 2016, it is concluded that:

1. The financial performance of coal mining companies, both private and state-owned companies, during the period before and after the implementation of the 35,000-Mega Watt Fast Track Program in 2013-2018 based on eight financial ratio measurements of the Minister Decree of SOE No. KEP-100/MBU/2002 mostly are good. Toba Bara Sejahtera, Mitrabara Adiperdana, Indo Tambangraya Megah, Bukit Asam, Adaro Energy, Baramulti Suksessarana, Bayan Resources, and Delta Dunia Makmur showed a stable condition for six years with the 'Healthy' categories were AAA and AA level. In addition, Resource Alam Indonesia's health level demonstrated a stable condition for six years with 'Less Healthy' category was BB level though in general, it had a slight decrease in financial ratio values. At the same time, Atlas Resources' performance in the before and after-period worsened and had the lowest level for CCC, indicated not a healthy condition.
2. The difference in the financial performance of coal mining companies between the period before the implementation of the 35,000-Mega Watt Fast Track Program in 2013-2015 and after the implementation of the program in 2016-2018 using the paired t-statistical approach is No Significant.
3. The 35,000-Mega Watt Fast Track Program during 2016-2018 has supply mostly by coal than non-fossil energy. Therefore, it could be concluded that there was no significant reduction in carbon gas emission through The 35,000-Mega Watt Fast Track Program in 2016-2018.

Based on the measurement and analysis, the author designed recommendations. The recommendations are:

1. Toba Bara Sejahtera, Mitrabara Adiperdana, Indo Tambangraya Megah, Bukit Asam, Adaro Energy, Baramulti Suksessarana, Bayan Resources, and Delta Dunia Makmur must focus on growing their business to enhance the market

shares in order to boost profits and remain competitive in the primary electricity industry as a coal mining company. As the domestic market will still promise in the future, the companies can strengthen their sales through coal for central electricity by increasing the contract values with the government and investing more to expand their market.

2. Atlas Resources and Resource Alam Indonesia should manage its current ratio in control and keep the balance between existing assets and current liabilities. The companies must perform financial actions to achieve their financial loss of current performance and operation cost-efficiently.
3. Both SOEs and private companies, excluding Atlas Resources, have successfully managed their business. This result was considered good, although the companies' sale growths after the implementation of the 35,000-Fast Track Program was relatively stable. However, this does not rule out any possibility of developing potential markets in the future because the companies reach all levels of climate and environmental changes that occur in Indonesia. Therefore, the companies must continuously set plans for regulatory change demands in Indonesia to reduce greenhouse gas emissions for the next 5 to 10 years. Companies have to explore technology to change coal become a clean thing to remain competitive in the market due to social demands. This is because the coal industries necessarily pay close attention to social and environmental issues regarding the rise in global temperatures, and one of which is burning coal producing carbon gas emissions, and the companies must comply with the Paris Agreement.
4. Coal companies must be careful of making investment decisions in order to achieve the target of the 35,000-MW program carried by the Indonesian Government. By paying attention to the fluctuating conditions in the reference coal prices in Indonesia, the companies necessarily pay attention to expensive exploration costs during financial crisis due to falling commodity prices.
5. High economic growth will increase electricity demand for both households and industry. Therefore, the government necessarily increases economic growth to achieve the target of the 35,000-MW program in Indonesia because this program is a demand to continuously increase domestic electricity consumption from year to year. To achieve the target of the 35,000-MW program, the synergy of the Minister of Energy and Mineral Resources, the Minister of State-Owned Enterprise, and the Minister of Finance is required.

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