

## THE FINANCIAL PERFORMANCE ANALYSIS OF INDONESIA STATE-OWNED MINING COMPANIES: PRE & POST SUB-HOLDINGS REFORMATION (SAHAM DWIWARNA)

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### ABSTRACT

*In 2017, three major state-owned mining companies in Indonesia, PT Batubara Bukit Asam Tbk (PTBA), PT Timah Tbk (TINS), and PT Aneka Tambang Tbk (ANTM) ("Sub-Holding Companies") became the subsidiaries of PT Inalum ("Holding Company"). The sub-holdings reformation has turned investors worried that the government would no longer make the three respective companies a priority. Furthermore, it has prompted the Coalition of Civil Society Rescue of SOE to file a petition for judicial review of the Government Regulation (Peraturan Pemerintah) No.47 of 2017 in the form of a constitutional effort to ensure the holding reformation is a fault of policy. However, government intervention was still significant to the Sub-Holding companies due to the ownership of Saham Dwiwarna. Albeit the raising concern of several parties, the impact of the three sub-holding companies' changing structure was limited. Therefore, the purpose of this study is to analyze the implications of the sub-holdings reformation by evaluating significant differences in the financial performances pre and post-sub-holdings reformation based on the official audited financial reports in 2015 – 2019. Financial ratio analysis and statistical t testing were used to compare the performances. Results indicate that there is a significant difference in the total assets turnover based on the paired t-test statistical method. However, the authors discovered there is no significant difference for the rest of the company's financial performance for two years pre (2015-2016) and post (2018-2019) the sub-holding reformation. Nonetheless, even though there is no significant difference in the company's financial performance, after the reformation, they are able to strengthen their position in the mining industry by increasing their business capacity amidst the intense industry competition with private-owned companies.*

Key words: Financial ratio analysis, Indonesia mining listed companies, Saham Dwiwarna, state owned company, student t-test.

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### INTRODUCTION

Indonesia continues to be an essential player in the global mining company with the production of coal, copper, gold, tin, bauxite, and nickel. Over the years, the mining industry has always been a significant contributor to the total Indonesian Gross Domestic Product. However, the mining sector's contribution to Indonesian GDP declined from 6.1% in 2011 to 4.2% in 2016. It had since recovered to relatively 5% in 2018 (PwC, 2019).

The Indonesian government, both central and regional, plays an essential role in the mining industry by setting national mining policies, standards, guidelines, and criteria, as well as for deciding on mining authorization procedures. In addition, the government is also highly involved in the development, control, evaluation, and conflict resolution in the sector. It was hoped that implementing specific regulations and its supporting framework would provide investors with the imperative regulatory certainty to stimulate new investment and strengthen Indonesia's position as the leading player in the mining sector (PwC, 2019).

Regarding the government's involvement in this industry, State-Owned Enterprises (SOE) also play a role in determining the course of the country's economy, including raising the industry's growth. Thus, the establishment of sub-holdings reformation of the three major State-Owned mining companies in Indonesia, which include PT Batubara Bukit Asam Tbk (PTBA), PT Timah Tbk (TINS), and PT Aneka Tambang Tbk (ANTM) as the subsidiaries of PT Inalum is expected to influence the level of efficiency in the mining industry. The objective of the sub-holdings reformation of the mining companies on November 29th, 2017, is to control the mineral reserves, execute the program of the downstream and local content, and establish the mining SOEs as one of the world-class companies (Wijaya, Chandra & Rina Andriani, 2019).

However, the sub-holdings reformation has turned investors worried due to the decreasing price of the three shares at the close of trading on November 15th, 2017. PTBA's share price fell 4,87% to the level of Rp 11,225. Meanwhile, ANTM's shares fell 2,94% to the level of Rp 660, and TINS's shares also fell 1.1% to the level of Rp 900 per share. Due to the changing price, investors are worried that the government would no longer make the three respective companies a priority (Rahman, R. & Rahmawati, W. T., 2017).

Furthermore, the sub-holdings reformation has prompted the Coalition of Civil Society Rescue of SOE to file a petition for judicial review of the Government Regulation (Peraturan Pemerintah) No.47 2017 in the form of a constitutional effort to ensure the holding reformation by the government is a fault of policy. The petition is initiated due to the concern of losing the government's control over the three companies. Furthermore, the reformation is likely to lead to corporate actions that have the potential or real disadvantage to the national interest because of the change in structure from a state company to a private company (Mardatillah, A., 2018).

Despite several parties' concerns regarding this matter, the government still has more control over the other three sub-holdings (PTBA, TINS, & ANTM) due to its ownership of the Golden Share or Saham Dwiwarna over the companies. The Golden Share

is a tool used to ensure special state control over privatized joint-stock companies' activities. It can also be considered security to provide special rights (Tchilimova, Tatyana A., Anna I. Serebrennikova, & Irina A. Sofronova, 2019).

As mentioned by the CEO of ANTM in 2017, the Golden Share reserved several authorities, namely the appointment of commissioner and directors, change in capital structure, amendments to the articles of association, and divestments decisions, all of which will be directly controlled by the government (Sihite, J., 2017). Therefore, with a large-scale reformation that may potentially pressure the company's financial performance, the analysis of this subject centers on the financial performance pre (2015-2016) and post (2018-2019) the sub-holding reformation of the three Saham Dwiwarna, specifically on PT Batubara Bukit Asam Tbk (PTBA), PT Timah Tbk (TINS), and PT Aneka Tambang Tbk (ANTM).

## 2. RESEARCH OBJECTIVES

PT Batubara Bukit Asam Tbk (PTBA), PT Timah Tbk (TINS), and PT Aneka Tambang Tbk (ANTM) are three major State-Owned Enterprises in the mining industry. With the consolidation of these three respective companies as the sub-holdings of PT Inalum, the transformation of its status from being independent companies into subsidiaries are fully supported by the Indonesian government. This step is in accordance with the Government Regulation (Peraturan Pemerintah) Number 47 of 2017 concerning the addition of Capital Participation of the Indonesian government to Capital Shares of PT Inalum (PTBA Press Release, 2017). Considering this information, this analysis is conducted regarding the sub-holding reformation with the aim to:

1. Analyze whether there are significant differences in the company financial performance two years pre (2015-2016) and post (2018-2019) the sub-holding reformation, based on the paired t-test statistical method as well as the computed eight financial ratios analysis from the SOEs Minister's Decree No. 100, 2002 (*Keputusan Menteri Badan Usaha Milik Negara Nomor: Kep-100/MBU/2002*)
2. Analyze the financial healthiness rating pre (2015-2016) and post (2018-2019) sub-holding reformation to the three sub-holdings (PT Batubara Bukit Asam Tbk, PT Timah Tbk, and PT Aneka Tambang Tbk)

## 3. RESEARCH QUESTIONS

1. Are there any differences in the company financial performance based on financial ratio measurement between pre and post-sub-holding reformation?
2. How does the sub-holding reformation affect the healthiness level of the three respective sub-holdings (PT Batubara Bukit Asam Tbk, PT Timah Tbk, and PT Aneka Tambang Tbk)?
3. Is there any difference in the company's health condition between the respective sub-holdings (PT Batubara Bukit Asam Tbk, PT Timah Tbk, and PT Aneka Tambang Tbk)?

## 4. METHODOLOGY

### 4.1 FINANCIAL RATIO ANALYSIS

As one of the objectives of this research is to understand and diagnose the information based on the contained audited financial statements of the three respective companies, the descriptive Financial Ratio Analysis that is used is the eight indicators established on the State-Owned Enterprise Minister Decree No. 100, 2002 (*Keputusan Menteri Badan Usaha Milik Negara Nomor: Kep-100/MBU/2002*). The eight indicators consist of Return on Equity (ROE), Return on Investment (ROI), Cash Ratio, Current Ratio, Total Assets Turnover, Inventory Turnover, Collection Period, and Total Equity to Total Assets Ratio. The indicators from each company will be calculated. The total weighted scores will be determined to validate the financial performance and the level of each company's healthiness (Indonesia SOEs Minister's Decree, 2002).

- i. Return on Equity represents how much the company has earned from the number of funds invested by the shareholders (directly or through retained earnings) (Anthony, Hawkins, and Merchant, 2011).

$$\text{ROE: } \frac{\text{Net Income}}{\text{Shareholder's Equity}} \times 100\%$$

- ii. Return of Investment is broadly defined as net income divided by investment (Anthony, Hawkins, and Merchant, 2011).

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

- iii. The Cash Ratio measured a company's liquidity, specifically the ratio of a company's total cash and cash equivalents to its current liabilities (Ross et al., 2012).

$$\text{Cash Ratio: } \frac{\text{Cash}}{\text{Current Liabilities}} \times 100\%$$

iv. The Current Ratio indicates the entity's ability to meet its current obligations. It is the ratio of current assets to current liability (Anthony, Hawkins, and Merchant, 2011).

$$\text{Current Ratio: } \frac{\text{Current Assets}}{\text{Current Liabilities}} \times 100\%$$

v. Total Asset Turnover measured the effectiveness of total assets that have been used to generate sales (Ross et al., 2012).

$$\text{Total Asset Turnover: } \frac{\text{Net Sales}}{\text{Capital Employed}} \times 100\%$$

\*Note: Capital Employed = Total Assets (excluding Non-Operating Assets) – Current Liabilities (Tulsian et al., 2020)

vi. Inventory Turnover is used to analyze the size of the inventory item. It indicates the velocity with which merchandise moves through a business (Anthony, Hawkins, and Merchant, 2011).

$$\text{Inventory Turnover: } \frac{\text{Inventory}}{\text{Cost of Goods Sold}} \times 365$$

vii. The Collection Period is used to analyze how many days' worth of sales is represented in accounts receivable (Anthony, Hawkins, and Merchant, 2011).

$$\text{Collection Period: } \frac{\text{Account Receivables}}{\text{Sales}} \times 365$$

viii. Total Equity to Total Asset Ratio is used to indicate the number of a company's assets that have been generated by issuing equity shares instead of taking on debt (Kenton, 2020).

$$\text{Total Equity to Total Asset Ratio: } \frac{\text{Total Equity}}{\text{Total Assets}} \times 100\%$$

#### 4.2. ASSESSMENT METHOD OF HEALTHINESS RATE FOR INDONESIA STATE-OWNED ENTERPRISE

Considering the business world in an increasingly open economic situation needs to be based on means and work appraisal systems that can encourage companies to improve efficiency and competitiveness. In 2002, the Ministry of State-Owned Enterprises (Kementrian Badan Usaha Milik Negara) established an assessment standard for the state-owned enterprise's performance indicators.

Seeing the purpose of this study is to analyze state-owned enterprises' financial performance, the authors use Indonesia SOEs Minister's Decree No. 100, 2002 (Keputusan Menteri Badan Usaha Milik Negara Nomor: Kep-100/MBU/2002) as the guidance. By sourcing data from an audited report from IDX, and referring to article 3, paragraph 3: "BUMN Health Level Assessment according to this decree is only applied to BUMN if the accountant's examination results on annual financial calculations the company concerned are declared with the qualification 'Fair Without Exception' or "Unqualified" qualification of public accountants or Financial and Development Supervisory Agency."

According to the article 3, paragraph 1, SOE Health Level Assessment is classified into:

**Table 1. Classification of Health Level Assessment**

Healthiness Level	Rating	Total Weighted Score (TWS)
Healthy	AAA	TWS > 95
	AA	80 < TWS <= 95
	A	65 < TWS <= 80
Less Healthy	BBB	50 < TWS <= 65
	BB	40 < TWS <= 50
	B	30 < TWS <= 40
Unhealthy	CCC	20 < TWS <= 30
	CC	10 < TWS <= 20
	C	TWS <= 10

The total weighted score is obtained from summing up the score of 8 financial ratios. Since the mining industry is classified as non-infrastructure SOE, according to the Indonesia SOEs Minister's Decree No. 100, 2002, the total weighted score of non-infrastructure is 70, as shown as the table below:

**Table 2. List of indicators and financial aspect weights**

Indikator	Bobot	
	Infra	Non Infra
1. Imbalan kepada pemegang saham (ROE)	15	20
2. Imbalan Investasi (ROI)	10	15
3. Rasio Kas	3	5
4. Rasio Lancar	4	5
5. Colection Periods	4	5
6. Perputaran persediaan	4	5
7. Perputaran total asset	4	5
8. Rasio modal sendiri terhadap total aktiva	6	10
<b>Total Bobot</b>	50	70

Source: Indonesia SOEs Minister's Decree No. 100, 2002

The result is gathered from calculating financial ratios as below (in nature classification of this study, authors refer to "Non-Infra" column):

1. Return on Equity (ROE)

**Table 3. List of assessment scores ROI**

ROE (%)	Skor	
	Infra	Non Infra
15 < ROE	15	20
13 < ROE ≤ 15	13,5	18
11 < ROE ≤ 13	12	16
9 < ROE ≤ 11	10,5	14
7,9 < ROE ≤ 9	9	12
6,6 < ROE ≤ 7,9	7,5	10
5,3 < ROE ≤ 6,6	6	8,5
4 < ROE ≤ 5,3	5	7
2,5 < ROE ≤ 4	4	5,5
1 < ROE ≤ 2,5	3	4
0 < ROE ≤ 1	1,5	2
ROE < 0	1	0

Source: Indonesia SOEs Minister's Decree No. 100, 2002

2. Return on Investment (ROI)

**Table 4. List of assessment scores ROE**

ROI (%)	Skor	
	Infra	Non Infra
18 < ROI	10	15
15 < ROI ≤ 18	9	13,5
13 < ROI ≤ 15	8	12
12 < ROI ≤ 13	7	10,5
10,5 < ROI ≤ 12	6	9
9 < ROI ≤ 10,5	5	7,5
7 < ROI ≤ 9	4	6
5 < ROI ≤ 7	3,5	5
3 < ROI ≤ 5	3	4
1 < ROI ≤ 3	2,5	3
0 < ROI ≤ 1	2	2
ROI < 0	0	1

Source: Indonesia SOEs Minister's Decree No. 100, 2002

3. Cash Ratio

**Table 5. List of assessment scores cash ratio**

Cash Ratio = x (%)	Skor	
	Infra	Non Infra
$x \geq 35$	3	5
$25 \leq x < 35$	2,5	4
$15 \leq x < 25$	2	3
$10 \leq x < 15$	1,5	2
$5 \leq x < 10$	1	1
$0 \leq x < 5$	0	0

Source: Indonesia SOEs Minister's Decree No. 100, 2002

4. Current Ratio

**Table 6. List of assessment scores current ratio**

Current Ratio = x (%)	Skor	
	Infra	Non Infra
$125 \leq x$	3	5
$110 \leq x < 125$	2,5	4
$100 \leq x < 110$	2	3
$95 \leq x < 100$	1,5	2
$90 \leq x < 95$	1	1
$x < 90$	0	0

Source: Indonesia SOEs Minister's Decree No. 100, 2002

5. Collection Periods (CP), take the best score of either 2 variables below:

**Table 7. List of assessment scores collection periods**

CP = x (hari)	Perbaikan = x (hari)	Skor	
		Infra	Non Infra
$x \leq 60$	$x > 35$	4	5
$60 < x \leq 90$	$30 < x \leq 35$	3,5	4,5
$90 < x \leq 120$	$25 < x \leq 30$	3	4
$120 < x \leq 150$	$20 < x \leq 25$	2,5	3,5
$150 < x \leq 180$	$15 < x \leq 20$	2	3
$180 < x \leq 210$	$10 < x \leq 15$	1,6	2,4
$210 < x \leq 240$	$6 < x \leq 10$	1,2	1,8
$240 < x \leq 270$	$3 < x \leq 6$	0,8	1,2
$270 < x \leq 300$	$1 < x \leq 3$	0,4	0,6
$300 < x$	$0 < x \leq 1$	0	0

Source: Indonesia SOEs Minister's Decree No. 100, 2002

6. Inventory Turnover, take the best score of either 2 variables below:

**Table 8. List of assessment scores collection periods**

PP = x (hari)	Perbaikan (hari)	Skor	
		Infra	Non Infra
$x \leq 60$	$35 < x$	4	5
$60 < x \leq 90$	$30 < x \leq 35$	3,5	4,5
$90 < x \leq 120$	$25 < x \leq 30$	3	4
$120 < x \leq 150$	$20 < x \leq 25$	2,5	3,5
$150 < x \leq 180$	$15 < x \leq 20$	2	3
$180 < x \leq 210$	$10 < x \leq 15$	1,6	2,4
$210 < x \leq 240$	$6 < x \leq 10$	1,2	1,8
$240 < x \leq 270$	$3 < x \leq 6$	0,8	1,2
$270 < x \leq 300$	$1 < x \leq 3$	0,4	0,6
$300 < x$	$0 < x \leq 1$	0	0

Source: Indonesia SOEs Minister's Decree No. 100, 2002

7. Total Asset/Total Asset Turn Over (TATO) take the best score of either 2 variables below:

**Table 9. List of assessment scores collection periods**

TATO = x (%)	Perbaikan = x (%)	Skor	
		Infra	Non Infra
$120 < x$	$20 < x$	4	5
$105 < x \leq 120$	$15 < x \leq 20$	3,5	4,5
$90 < x \leq 105$	$10 < x \leq 15$	3	4
$75 < x \leq 90$	$5 < x \leq 10$	2,5	3,5
$60 < x \leq 75$	$0 < x \leq 5$	2	3
$40 < x \leq 60$	$x \leq 0$	1,5	2,5
$20 < x \leq 40$	$x < 0$	1	2
$x \leq 20$	$x < 0$	0,5	1,5

Source: Indonesia SOEs Minister's Decree No. 100, 2002

8. Total Asset to Total Equity

**Table 10. List of assessment scores total assets to total equity**

TMS thd TA (%) = x	Skor	
	Infra	Non Infra
$x < 0$	0	0
$0 \leq x < 10$	2	4
$10 \leq x < 20$	3	6
$20 \leq x < 30$	4	7,25
$30 \leq x < 40$	6	10
$40 \leq x < 50$	5,5	9
$50 \leq x < 60$	5	8,5
$60 \leq x < 70$	4,5	8
$70 \leq x < 80$	4,25	7,5
$80 \leq x < 90$	4	7
$90 \leq x < 100$	3,5	6,5

Source: Indonesia SOEs Minister's Decree No. 100, 2002

The last step is to sum the total score obtained from the eight financial ratios result. Subsequently, the weighted score is divided by 70 as the denominator and multiplied by 100. The total weighted score will determine the rating of company healthiness (whether it fall under AAA, AA, A, BBB, BB, B, CCC, CC, or C). (Indonesia SOEs Minister's Decree No. 100, 2002).

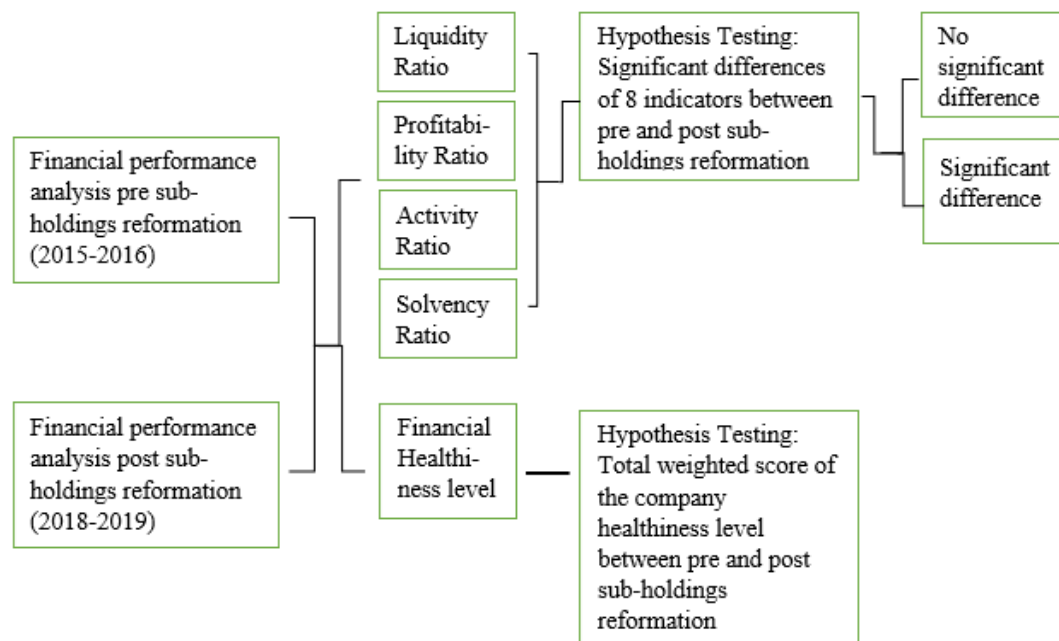
### 4.3 STUDENT T-TEST INFERENTIAL STATISTIC

Student's t-Test is a statistical method used to test the hypothesis to compare means between two groups. The t-Test is one of the most common statistical techniques to test whether the mean difference between two groups is statistically significant. The invalid hypothesis stated that both means are statistically equal, whereas the alternative hypothesis stated that both means are not statistically equal. There are three types of student t-Test: one sample t-Test, independent samples t-Test, and paired samples t-Test. However, this research will practice the paired samples t-Test since it is used to compare the mean of a single group – mining listed companies – that is examined at two different points in time. (Mishra, Prabhaker, et al., 2019)

The paired samples t-Test is sometimes called the dependent t-Test. It is used to determine whether the change in means between two-paired observations is statistically significant. Same subjects are measured at two different time points or observed by two different methods (Mishra, Prabhaker, et al., 2019). As this method is measured in two different time points, many industries are frequently used, such as healthcare, finance, business, and economic statics. Antoine Al-Achi (2019) stated this method could be used in the medical industry, for example, when researching to measure an individual's health condition before and after receiving medical treatments. Furthermore, it was used by Daryanto and Purwanto (2020) to measure the financial performance of the listed pharmaceutical companies in Indonesia before and after the implementation of a universal healthcare coverage initiation.

### 5. RESEARCH MODEL

Figure 1: Research Model



The figure above represents the model that is used in this research. It is adapted from Daryanto and Purwanto's (2020) studies regarding financial performance analysis to compare the significant difference between a particular period to another. This research's financial data were obtained from the published audited annual report of each company and financial reports published on IDX websites. Subsequently, the collected data are computed to obtain the Financial Ratio Analysis of eight indicators, which will be used to resolve the nine hypotheses addressed in the following section.

### 6. HYPHOTESIS

- H1: There is a significant difference in the company's ROI analysis between pre and post-sub-holdings reformation.
- H2: There is a significant difference in the company's ROE analysis between pre and post-sub-holdings reformation.
- H3: There is a significant difference in the company's Cash Ratio analysis between pre and post-sub-holdings reformation.
- H4: There is a significant difference in the company's Current Ratio analysis between pre and post-sub-holdings reformation.
- H5: There is a significant difference in Total Assets Turnover analysis of the company between pre and post-sub-holdings reformation.
- H6: There is a significant difference in the company's Inventory Turnover analysis between pre and post-sub-holdings reformation.
- H7: There is a significant difference in Collection Period analysis of the company between pre and post-sub-holdings reformation.
- H8: There is a significant difference in Total Equity to Total Assets Ratio analysis of the company between pre and post-sub-holdings reformation.
- H9: There is a significant difference in the Total Weighted Score of the Company Healthiness Level between pre and post-sub-holdings reformation.

## 7. RESEARCH LIMITATIONS

As initial research, the authors have analyzed PT Batubara Bukit Asam Tbk's financial performance from 2015 - 2019. However, to expand the study, the authors decided to include the financial performance of PT Timah Tbk (TINS) and PT Aneka Tambang Tbk (ANTM). The three companies undergo a massive transformation of becoming the subsidiaries of PT Inalum with high involvement from the government through Saham Dwiwarna that was established in 2017. Hence, the study focused on analyzing the financial performance difference of the three companies' pre and post-sub-holding reformation (2015-2019) and analyzing whether there is a healthiness level difference among those companies.

However, given the limited sample size of data and the small number of mining companies included in this study, it is recommended to conduct a broader study with more extended periods and include other companies with less or no government involvement to compare to. Considering that the sub-holdings reformation was a large-scale move in the mining industry, it is also recommended to include a greater variety of companies with a different methodology to obtain a more comprehensive understanding regarding the effect of the sub-holding reformation on the mining industry.

## 8. RESULTS & DISCUSSION

### 8.1 FINANCIAL RATIO ANALYSIS CONSOLIDATED FROM ALL COMPANIES

From the result of paired t-test statistical analysis from three mining companies, the table below is the summary of the eight financial ratios based on the provision of State-Owned Enterprise Minister Decree:

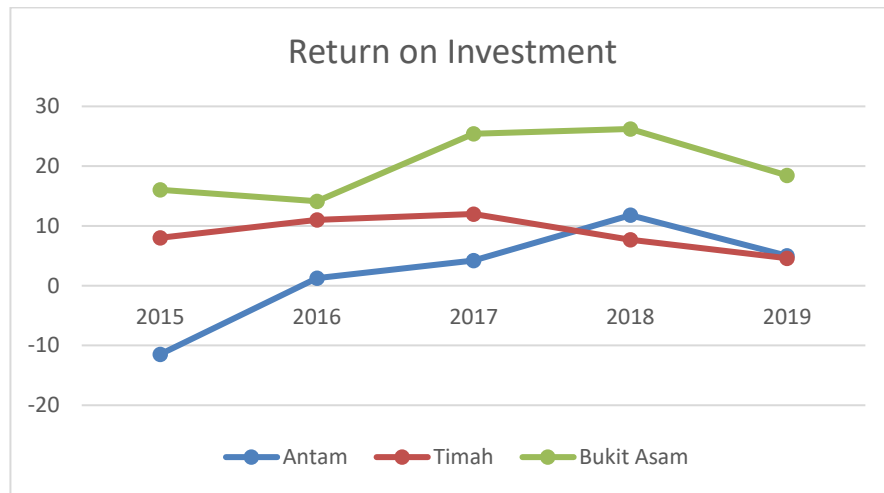
**Table 11. t-Test Results**

Financial Indicators	Period	Means	SD	Paired Sample t-test	Decision
ROI	Before	6,49	10,22032	0,155510021	P value > 0.05. Reject the hypothesis. There is no significant difference
	After	12,29333	8,544607		
ROE	Before	6,995	11,94487	0,402155373	P value > 0.05. Reject the hypothesis. There is no significant difference
	After	9,036667	15,53605		
Cash Ratio	Before	88,87	73,8421	0,18046412	P value > 0.05. Reject the hypothesis. There is no significant difference
	After	54,28167	47,90776		
Current Ratio	Before	196,0817	44,31158	0,173267101	P value > 0.05. Reject the hypothesis. There is no significant difference
	After	166,0183	59,44008		
Inventory Turnover	Before	88,5	54,35715	0,610435835	P value > 0.05. Reject the hypothesis. There is no significant difference
	After	71,16667	59,69729		
Total Assets Turnover	Before	73,92333	32,3513	0,029867848	P value < 0.05. Reject the hypothesis. There is significant difference
	After	116,7067	37,28828		
Collection Period	Before	38	14,1845	0,381163282	P value > 0.05. Reject the hypothesis. There is no significant difference
	After	35	18,82551		
TETA	Before	58,435	2,363859	0,261785003	P value > 0.05. Reject the hypothesis. There is no significant difference
	After	53,58	17,18911		
Total Weighted Score	Before	67,38333	21,96048	0,395064556	P value > 0.05. Reject the hypothesis. There is no significant difference
	After	70,89333	22,51369		



**I. PROFITABILITY RATIO**

**Figure 2: Return on Investment (ROI) (%)**



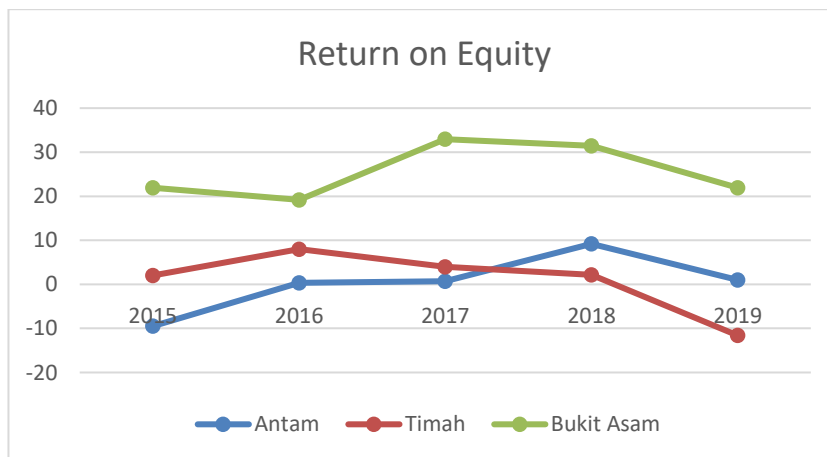
**Table 12. Return on Investment**

	2015	2016	2017	2018	2019
Antam	-11,48	1,26	4,22	11,79	5,02
Timah	8	11	12	7,7	4,6
Bukit Asam	16,03	14,13	25,41	26,22	18,43

Based on the paired t-test result consolidated from the three state-owned enterprises shown in figure 2, it delineated that there is no significant difference in ROI ratio with p-value = 0,16 between before (2015-2016) and after (2018-2019) the sub-holdings reformation.

Nevertheless, as the authors analyze ROI changes at each company between periods, there is a significant difference encountered by PT Aneka Tambang Tbk (ANTM) with a significant increase after the reformation. At the same time, PT Timah Tbk (TINS) contrarily dived. However, all three companies experience declining performance from 2018 to 2019.

**Figure 3: Return on Equity (ROE) (%)**



**Table 13. Return on Equity**

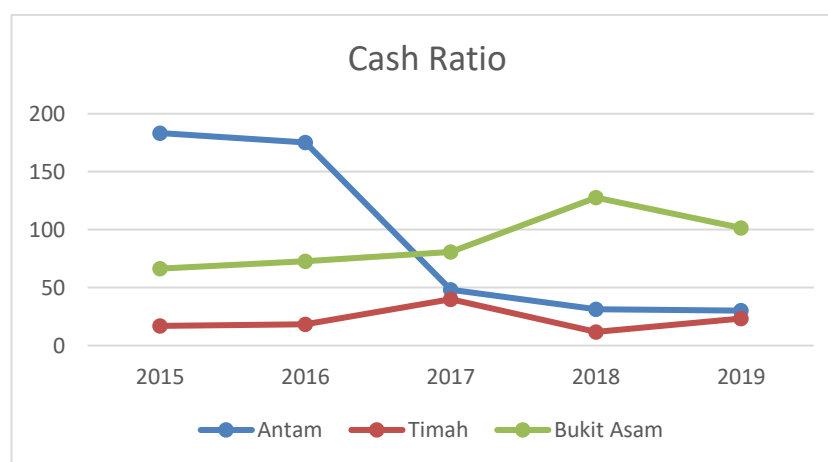
	2015	2016	2017	2018	2019
Antam	-9,49	0,35	0,74	9,19	1,02
Timah	2	8	4	2,2	-11,6
Bukit Asam	21,93	19,18	32,95	31,48	21,93

Based on the paired t-test result consolidated from the three state-owned enterprises shown in Figure 3, it delineated that there is no significant difference in ROE ratio with p-value = 0,40 between before (2015-2016) and after (2018-2019) the sub-holdings reformation.

Nevertheless, as the authors analyze ROE changes at each company between periods, the number of PT Aneka Tambang Tbk (ANTM) fluctuate after the reformation while PT Timah Tbk (TINS) and PT Batubara Bukit Asam Tbk (PTBA) is declining. All ROE of three companies drops from 2018 to 2019.

## II. LIQUIDITY RATIO

**Figure 4: Cash Ratio (%)**



**Table 14. Cash Ratio**

	2015	2016	2017	2018	2019
Antam	183,36	175,16	48,17	31,27	30,15
Timah	17	18,42	40	11,82	23,38
Bukit Asam	66,41	72,87	80,87	127,67	101,4

Based on the paired t-test result consolidated from the three state-owned enterprises shown in Figure 4, it delineated that there is no significant difference in the Cash Ratio with p-value = 0,18 between before (2015-2016) and after (2018-2019) the sub-holdings reformation.

Nevertheless, as the authors analyze the Cash Ratio changes at each company between periods, the number of PT Aneka Tambang Tbk (ANTM) and PT Timah Tbk (TINS) decline drastically after the reformation. Furthermore, the ROE of PT Batubara Bukit Asam Tbk (PTBA) arose shortly because, in 2019, the Cash Ratio of PT Batubara Bukit Asam Tbk (PTBA) and PT Aneka Tambang Tbk (ANTM) was decreased. After taking a hit in 2018, the Cash Ratio of PT Timah Tbk (TINS) was ascended in 2019.

Figure 5: Current Ratio (%)

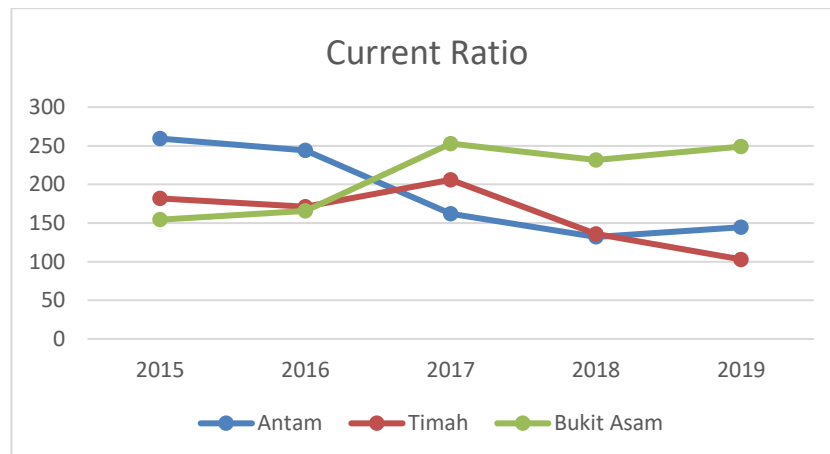


Table 15. Current Ratio

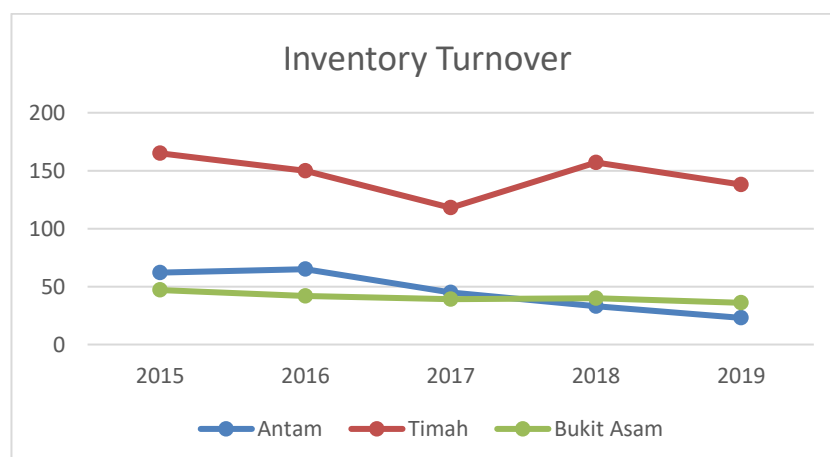
	2015	2016	2017	2018	2019
Antam	259,32	244,24	162,13	132,01	144,81
Timah	182	171	206	135,89	102,92
Bukit Asam	154,35	165,58	252,87	231,51	248,97

Based on the paired t-test result consolidated from the three state-owned enterprises shown in Figure 5, it delineated that there is no significant difference in the Current Ratio with  $p\text{-value} = 0,17$  between before (2015-2016) and after (2018-2019) the sub-holdings reformation.

Nevertheless, as the authors analyze the Current Ratio changes at each company between periods, there is a significant decrease in their capability to meet its short-term obligations that are due within a year. PT Aneka Tambang Tbk (ANTM) and PT Batubara Bukit Asam Tbk (PTBA) managed to increase their Current Ratio while PT Timah Tbk (TINS) still sustained a decrease.

### III. ACTIVITY RATIO

Figure 6: Inventory Turnover (Days)



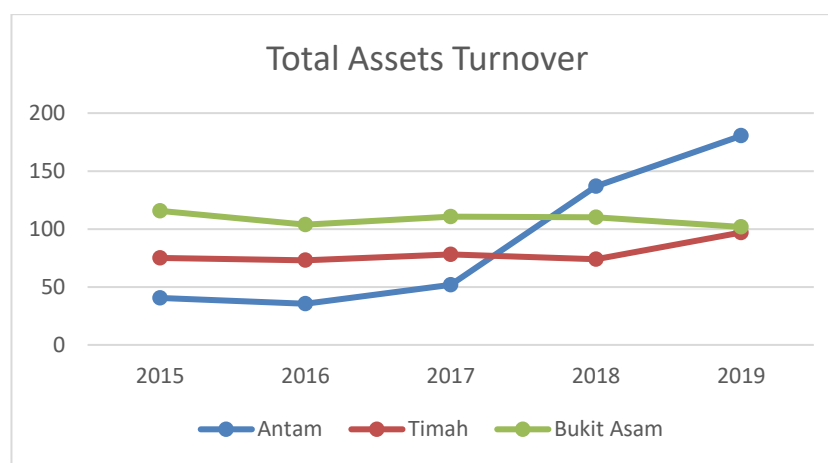
**Table 16. Inventory Turnover**

	2015	2016	2017	2018	2019
Antam	62	65	45	33	23
Timah	165	150	118	157	138
Bukit Asam	47	42	39	40	36

Based on the paired t-test result consolidated from the three state-owned enterprises shown in Figure 6, it delineated that there is no significant difference in Inventory Turnover with p-value = 0,61 between before (2015-2016) and after (2018-2019) the sub-holdings reformation.

Nevertheless, as the authors analyze the Inventory Turnover changes at each company between periods, the reformation has benefited PT Aneka Tambang Tbk (ANTM) significantly, and PT Batubara Bukit Asam Tbk (PTBA) also has a faster Inventory Turnover. However, PT Timah Tbk (TINS) was doing differently with other sub-holdings; days of Inventory Turnover increased even though it decreased again in 2019.

**Figure 7: Total Assets Turnover (%)**



**Table 17. Total Assets Turnover**

	2015	2016	2017	2018	2019
Antam	40,48	35,53	51,73	137	180,43
Timah	75	73	78	74	97
Bukit Asam	115,65	103,88	110,69	110,03	101,78

Total Assets Turn Over is the only ratio experience significant difference based on the paired t-test result consolidated from the three state-owned enterprises shown in Figure 7 with p-value = 0,03 between before (2015-2016) and after (2018-2019) the sub-holdings reformation.

Figure 8: Collection Period (Days)

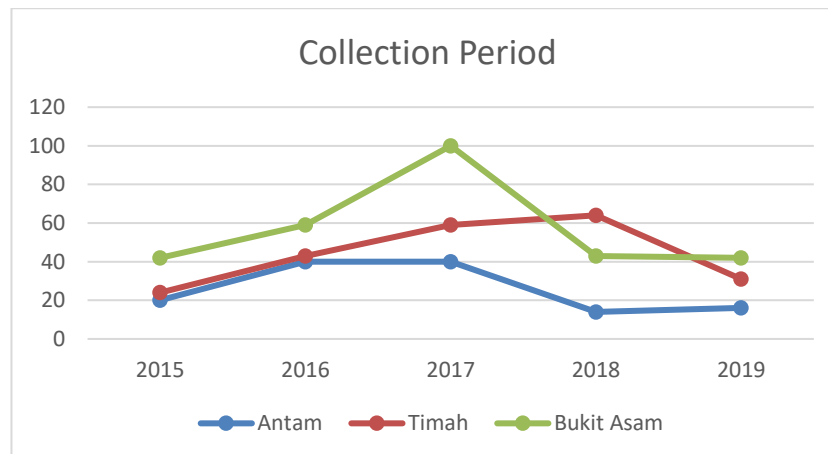


Table 18. Collection Period

	2015	2016	2017	2018	2019
Antam	20	40	40	14	16
Timah	24	43	59	64	31
Bukit Asam	42	59	100	43	42

Based on the paired t-test result consolidated from the three state-owned enterprises shown in Figure 8, it delineated that there is no significant difference in Collection Period with p-value = 0,38 between before (2015-2016) and after (2018-2019) the sub-holdings reformation.

Nevertheless, as the authors analyze the Collection Period changes at each company between periods, PT Aneka Tambang Tbk (ANTM) and PT Batubara Bukit Asam Tbk (PTBA) improved significantly after the reformation as shown with the downturn number of days after the reformation. PT Timah Tbk (TINS) was also improved after a slight increase of days after the reformation.

#### IV. SOLVENCY RATIO

Figure 9: Total Equity to Total Assets (%)

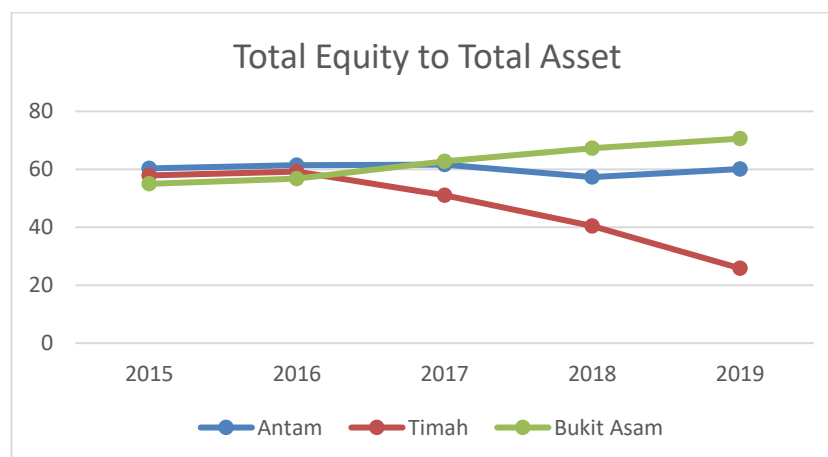


Table 19. Total Equity to Total Assets

	2015	2016	2017	2018	2019
Antam	60,34	61,4	61,6	57,3	60,05
Timah	57,88	59,21	51,04	40,4	25,83
Bukit Asam	54,98	56,8	62,76	67,31	70,59

Based on the paired t-test result consolidated from the three state-owned enterprises shown in Figure 9, it delineated that there is no significant difference in Total Equity to Total Assets with p-value = 0,26 between before (2015-2016) and after (2018-2019) the sub-holdings reformation. No significant difference is shown in the trend that was encountered by all three companies. Only the number of PT Timah Tbk (TINS) dropped by a significant amount, especially in 2019.

## 8.2 FINANCIAL HEALTHINESS LEVEL

Figure 10: Total Weighted Score

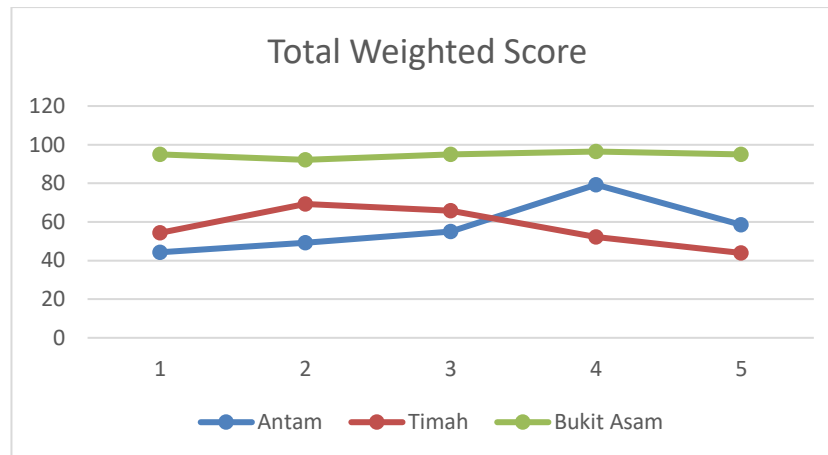


Table 20. Total Weighted Score

	2015	2016	2017	2018	2019
Antam	44,29	49,29	55	79,29	58,57
Timah	54,29	69,29	65,71	52,14	43,93
Bukit Asam	95	92,14	95	96,43	95

Based on the paired t-test result consolidated from the three state-owned enterprises shown in Figure 10, it delineated that there is no significant difference in Total Weighted Score with p-value = 0,4 between before (2015-2016) and after (2018-2019) the sub-holdings reformation.

No significant difference at the overall financial healthiness also indicated at the healthiness level, and rating that can be seen at the table below that illustrates the classification of healthiness level based on the provision of State-Owned Enterprise Minister Decree:

Table 19. Healthiness Level Results

Company	Year	Total Weighted Score	Rating	Healthiness Level
Antam	2015	44,28571429	BB	Less Healthy
	2016	49,28571429	BB	Less Healthy
	2017	55	BBB	Less Healthy
	2018	79,28571429	A	Healthy
	2019	58,57142857	BBB	Less Healthy
Timah	2015	54,28571429	BBB	Less Healthy
	2016	69,28571429	A	Healthy
	2017	65,71428571	A	Healthy
	2018	52,14285714	BBB	Less Healthy
	2019	43,92857143	BB	Less Healthy
Bukit Asam	2015	95	AA	Healthy
	2016	92,14285714	AA	Healthy
	2017	95	AA	Healthy
	2018	96,42857143	AAA	Healthy
	2019	95	AA	Healthy

## 9. CONCLUSION AND RECOMMENDATION

This study learned a significant difference only happened at the total assets' turnover based on the paired t-test statistical method. However, the authors discovered no significant difference for the rest of the company's financial performance for two years pre (2015-2016) and post (2018-2019) the sub-holding reformation.

Referring to the financial ratio analysis by company, here are significant changes after the sub-holding reformation:

- All companies Current Ratios decreased after the reformation, even though overall performance has improved, and there are no significant changes.
- PT Aneka Tambang Tbk (ANTM) 's financial performance improved significantly, especially in terms of Return on Investment, Return on Equity, Inventory Turnover, and Total Assets to Total Turnover.
- Although PT Aneka Tambang Tbk (ANTM) 's overall financial performance improved significantly, their Cash Ratio experienced otherwise as it is declining after the reformation.
- The Total Assets to Total Turnover, Cash Ratio, Collection Period, and Total Equity to Total Assets in PT Batubara Bukit Asam Tbk (PTBA) improved.
- The Return of Investment, Return on Equity, Inventory Turnover, and Total Equity to Total Assets of PT Timah Tbk (TINS) is the worst compare to others.
- PT Timah Tbk (TINS) is the only company with significant improvement in terms of cash ratio. At the same time, PT Batubara Bukit Asam Tbk (PTBA) and PT Aneka Tambang Tbk (ANTM) took a hit even though the healthiness level of PT Timah Tbk (TINS) is worse compared to them. In terms of Total Assets to Total Turnover, in 2019, PT Timah Tbk (TINS) experienced improvement.
- In 2019 Return on Investment and Return on Equity dropped.

Their investors' raised concerns are uncalled-for since the reformation move did not cause a significant difference in financial performance for each company. On the contrary, the financial healthiness level of PT Aneka Tambang Tbk (ANTM) has improved quite significantly after the reformation. Even though the healthiness level of PT Timah Tbk (TINS) is decreasing, and there are no noticeable changes for PT Batubara Bukit Asam Tbk (PTBA), their overall financial performance has improved.

With some declining company's financial highlights and the mining industry's fluctuation competition, they still managed to get an improved activity ratio. After the reformation, they manage to turn their asset into sales quicker, and it is an indicator that their business conduct has improved. Not only that, they have more leverage to accelerate their conversion cycle. With the mining industry's rapid movement, they are successfully keeping up amidst the intense industry competition and improving their efficiency. Alongside the government's support with the release of Government Regulation Number 47 of 2017 concerning Additional State Capital Participation (*Peraturan Pemerintah Nomor 47 Tahun 2017 tentang Penambahan Penyertaan Modal Negara*), these companies grew stronger together. According to this government regulation, the reformation is meant to strengthen the capital structure and increase the business capacity of the Limited Liability Company (Persero). After the reformation, they increased sales, won more tenders, and improved their business activity efficiency.

Looking further to 2016, when the Minister of State-Owned Enterprises said that when companies merge, companies usually become more trustworthy and efficient. The plan to form a holding company is driven by the fact that many State-Owned Enterprises (BUMN) are still running independently, lacking coordination, and even competing with each other (Jatmiko, B.P., 2016). The authors conclude that this statement is proven to be true since PTBA, TINS, and ANTM ("Sub-Holding Companies") have become the subsidiaries of PT Inalum ("Holding Company").

Even after many things happened since 2016, up until now, the reformation is still gaining beneficial implications and being supported. In 2020, the Minister of State-Owned Enterprises is more aggressively carrying out restructuring. The government assesses that the benefits of establishing this mining State-Owned Enterprises (BUMN) holding include increasing business scale, product, and business diversification, increasing financial position and improving solvency and liquidity, and creating cost efficiency (Utami, D.N., 2020).

In conclusion, with many competitors, both foreigners and locals, and the fluctuating demand in the mining industry, joining forces across sectors came across as the right decision. The concern of investors in the lack of government involvement is understandable. However, as a matter of fact, with the government's support, they can gain a more secure position and have more competitive advantages. Nonetheless, they need to be attentive to managing their investment and capital. Many speculate that their budget spending is reckless to the overconfident after the reformation. Even though their healthiness level is satisfactory, moving forward, they need to be more careful utilizing their spending and allocating their budget.

## REFERENCES

- Al-Achi, Antoine. (2019). The Student's t-Test: A Brief Description. *Research & Reviews: Journal of Hospital and Clinical Pharmacy*, Volume 5, Issue 1, p. 1- 3. Retrieved from <https://www.researchgate.net/>
- Annual Report of PT Aneka Tambang Tbk. (2015-2019)
- Annual Report of PT Batubara Bukit Asam Tbk. (2015-2019)
- Annual Report of PT Timah Tbk. (2015-2019)
- Anthony, Hawkins, and Merchant. (2011). *Accounting: Text and Cases, 13th edition*. The McGraw-Hill Company, Inc.
- Daryanto, M.D., and Hery Purwanto. (2020). Financial Performance Analysis of Pharmaceutical Listed Companies Four Years Before and After Universal Healthcare Coverage Initiation in Indonesia. *International Journal of Business, Economics and Law*, Volume 21, Issue 3, p. 30-46.
- Jatmiko, B.P. (2016). Holding Energi Tak Sekedar Menggabungkan 2 BUMN. *Kompas*. Retrieved from <https://money.kompas.com/read/2016/05/31/071200726/Holding.Energi.Tak.Sekedar.Menggabungkan.2.BUMN.?page=all>
- Peraturan Pemerintah Republik Indonesia Nomor 43 Tahun 2005 Tentang Penggabungan, Peleburan, Pengambilalihan, dan Perubahan Bentuk Badan Hukum Badan Usaha Milik Negara. (2005). (Government Regulation of the Republic of Indonesia Number 43 of 2005 concerning Merger, Consolidation, Acquisition, and Change of Forms of State-Owned Enterprises Legal Entities). Retrieved from <http://bpbk.go.id>
- Peraturan Pemerintah Republik Indonesia Nomor 47 Tahun 2017 Tentang Penambahan Penyertaan Modal Negara Republik Indonesia ke Dalam Modal Saham Perusahaan Perseroan (Persero) Pt Indonesia Asahan Aluminium. (2017). (Government Regulation of the Republic of Indonesia Number 47 of 2017 concerning Addition of the Capital Participation of the Republic of Indonesia to the Share Capital of the Company (Persero) Pt Indonesia Asahan Aluminium.). Retrieved from <https://sipuu.setkab.go.id/PUUdoc/175344/PP%20Nomor%2047%20Tahun%202017.pdf>
- Kenton, Will. Shareholder Equity Ratio. (2020). *www.investopedia.com*. Retrieved from <https://www.investopedia.com/terms/s/shareholderequityratio.asp>
- Keputusan Menteri BUMN No. KEP-100/MBU/2002 tentang Penilaian Tingkat Kesehatan Badan Usaha Milik Negara. (2002). (Indonesia State-Owned Enterprise Minister Decree on Healthiness Rate Assessment of State Owned-Enterprise). 4 June 2002. Retrieved from <http://jdih.bumn.go.id/baca/KEP-100/MBU/2002.pdf>
- Mardatillah, A. (2018). Saham Dwiwarna RI Adalah Kunci. *www.mediaindonesia.com*. Retrieved from <https://mediaindonesia.com/read/detail/133674-saham-dwiwarna-ri-adalah-kunci>
- Mishra, P., Singh, U, Pandey, C. M., Mishra, P., Pandey, G., (2019). Application of student's t-test, analysis of variance, and covariance. *Annals of Cardiac Anaesthesia*, Volume 22, Issue 4, p. 407-411. Retrieved from <https://www.researchgate.net/>
- PTBA Press Release. (2017). Tiga Perusahaan Resmi Menjadi Anggota Holding BUMN Industri Pertambangan. *www.ptba.co.id*. Retrieved from: [http://www.ptba.co.id/siaran\\_pers/tiga-perusahaan-resmi-menjadi-anggota-holding-bumn-industri-pertambangan.pdf](http://www.ptba.co.id/siaran_pers/tiga-perusahaan-resmi-menjadi-anggota-holding-bumn-industri-pertambangan.pdf)
- PT Aneka Tambang Tbk official website at <https://www.antam.com/en>
- PT Bukit Asam Tbk official website at <http://www.ptba.co.id/>
- PT Timah Tbk official website at <http://www.timah.com/v3/ina/home/>
- PwC. (2019). Mining in Indonesia: Investment and Taxation Guide
- Rahman, R. & Rahmawati, W. T. (2017). Tiga Perusahaan Resmi Menjadi Anggota Holding BUMN Industri Pertambangan. *www.investasi.kontan.co.id*. Retrieved from: <http://investasi.kontan.co.id/news/ini-efek-lepasnya-status-bumn-ke-ptba-tins-antm>
- Ramalan, S. (2020). Restrukturisasi, Ini Daftar Holding dan BUMN yang Dimerger Sepanjang 2015-2020. *Sindonews*. Retrieved from: <https://ekbis.sindonews.com/read/19336/34/restrukturisasi-ini-daftar-holding-dan-bumn-yang-dimerger-sepanjang-2015-2020-1602832251?showpage=all>
- Ross, Stephen A., et.al. (2012). *Fundamentals of Corporate Finance*. Asia Global edition, chapter 3, p.56-66. New York, NY: The McGraw-Hill Companies, Inc.
- Sihite, J. (2017). Alasan PP Holding BUMN Pertambangan Digugat. *www.hukumonline.com*. Retrieved from: <https://www.hukumonline.com/berita/baca/lt5a4df6fad2e56/alasan-pp-holding-bumn-pertambangan-digugat?page=3/>
- Tchilimova, T. A., Serebrennikova, A. I., & Sofronova, I. A. (2019). Golden Share as a Tool of Corporate Strategic Management of the State. *Advances in Economics, Business and Management Research*, volume 114, p. 525-527. Retrieved from: <https://www.researchgate.net/>
- Tulsian, P. C., Tulsian, B., & Tulsian, T. (2020). *Tulsian's Financial Management for CA Intermediate (New Syllabus) | For Paper 8A*. p. 2-66. India: McGraw Hill Education (India) Private Limited.
- Utami, D.N. (2020). Selain Likuidasi, Erick Thohir akan Merger 34 BUMN. *Ekonomi Bisnis*. Retrieved from <https://ekonomi.bisnis.com/read/20200930/9/1298444/selain-likuidasi-erick-thohir-akan-merger-34-bumn>
- Wijaya, Chandra & Rina Andriani. (2019). Potential policy impacts: Establishment of Indonesian Mining State-Owned Holding Company. *Jurnal Ilmiah Ilmu Administrasi Publik: Jurnal Pemikiran dan Penelitian Administrasi Publik*, Volume 9 Number 2, Page 213-224. Retrieved from: <http://ojs.unm.ac.id/iap>



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