

Financial Ratio Analysis and Du Pont System to Evaluate the Financial Performance of PTBA and ITMG

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Abstract- The research was conducted to analyze the financial performance of coal subsector energy sector companies, including PT Bukit Asam (Tbk) and PT Indo Tambangarya Megah (Tbk), with financial ratio analysis and Du Pont System. This study used balance sheet and income statement data from 2019 to 2022 from both companies and conducted financial ratio analysis on liquidity, activity, profitability, solvency, and with the Du Pont System. The results of the financial ratio analysis show that both companies have experienced an increase in the current ratio over the past four years, with a more significant increase occurring in ITMG. However, PTBA experienced fluctuations in the current ratio value. Both companies also experienced an increase in cash ratio in 2020. In addition, the total asset turnover ratio decreased in 2020 due to the Covid-19 pandemic, but in 2021 it increased due to increased production. The financial performance of the two companies is generally quite good with stable and good ratio values in the profitability ratio. Both companies also have good solvency ratios, with relatively low Debt to Equity Ratio (DER) and Debt to Asset Ratio. From the Du Pont analysis, in general, the performance of PT ITMG compared to PTBA is relatively better in terms of ROE and ROI Du Pont.

Keywords- Financial Ratio Analysis, Du Pont System, Liquidity Ratio, Profitability Ratio, Solvency Ratio

I. INTRODUCTION

Despite the increasing development of the business world in Indonesia, some companies are still trying to maintain their position amidst sharp competition in the local and international industries. To face the increasingly sharp competition in the free market, companies need to think about sustainable strategies to maximize company value and ensure their business continuity in the future (Afrizal et al, 2022). To achieve this goal, the industry must improve the quality and quantity of various fields in the company. Competitive competition among business actors is inevitable in achieving this goal. Often overlooked, good financial management can be a key factor in determining the success of a company in the business world (Astuti et al, 2022). Therefore, financial

statement analysis is important to calculate the financial performance of the industry (Purba et al, 2023).

Analysis of financial statements provides critical information about a company's financial health, including operating performance, profits, growth, cash flow, and financial stability (Purba et al, 2023). Through this analysis, the company can measure its financial performance and equate it with the financial performance of other industries in the same sector. According to (Trianto, 2017), financial performance reflects the state of the industry in achieving its success in the market or can also be referred to as the results obtained from all activities that have been carried out. Assessing the company's objectives in a certain period with the use of financial ratios ensures that the company's financial performance is achieved so that stakeholders can fulfill their interests (Jati and Jannah, 2022). So that in analyzing financial statements, management can achieve this by using tools such as financial ratios and Du Pont system analysis.

The Du Pont System is a framework that breaks down net income into three main ratios, namely profitability, asset efficiency, and debt utilization ratios, which are interrelated (Prastiti and Sulisty, 2022). The Du Pont System tool can describe the statement of financial position (balance sheet) and related profit and loss statements so that it becomes a useful tool for estimating the overall financial performance of a company (Pranata et al., 2021). With the Du Pont method, companies can gain a more thorough understanding of what factors affect their financial performance (Hamdani et al, 2018), because the approach is more holistic than the usual financial statement analysis. Then in this study, researchers obtained promising results by using financial ratio analysis and the Du Pont System to obtain the company's financial performance figures, which can be a reference for future investment and financial management decisions (Amaliyah and Herwiyanti, 2020).

This study analyzes the company's financial performance, namely in the energy sector of the coal subsector listed on the Indonesia Stock Exchange (IDX). Mining is one of the sectors affected by the Covid-19 pandemic (Agung and Susilawati, 2021). This is the basis for researchers in using the mining sector or energy sector

as the object of research to determine the performance position of mining companies before, during, and after the Covid-19 pandemic. Based on annual financial reports, mining companies listed on the IDX experienced a decrease in the average profitability ratio in the 2019 to 2020 period, especially in the gross profit margin, net profit margin, and return on equity variables, while the return on assets variable experienced a slight increase. This is the allegation that the Covid-19 pandemic has caused a decrease in the number of profits generated by the company, even though expenses, assets, and capital remain or even increase (Nadhip et al., 2022).

The research object in carrying out this research is PT Bukit Asam, Tbk. as a BUMN company in the coal subsector energy sector and PT Indo Tambangarya Megah, Tbk. as a private company in the coal subsector energy sector. Where the main objective of this study is to determine the financial performance analysis of PT Bukit Asam, Tbk. and PT Indo Tambangarya Megah, Tbk. based on financial ratio analysis and Du Pont System analysis during the period 2019 to 2022.

II. METHODOLOGY

This study utilizes data sources, namely secondary data that researchers take from the Indonesia Stock Exchange (IDX) website. By taking data in the form of financial statements of the Coal Sub-Sector Energy Sector companies, namely PT Bukit Asam Tbk and PT Indo Tambangarya Megah Tbk which are listed on the IDX for the period January 2019-December 2022.

Furthermore, this study refers to the purposive sampling method in sample selection, with the aim of selecting samples that are in accordance with predetermined criteria, thus ensuring that the samples used represent the population under study well and minimizing bias in the research results. Purposive sampling is a way of determining research samples based on considerations (Sugiyono, 2015).

Determination of the sample uses several criteria, namely:

1. The selection of the period January 2019 to December 2022 for the collection of fixed and complete financial reports from the coal sub-sector energy sector companies listed on the Indonesia Stock Exchange (IDX) provides an adequate time span to conduct a more detailed and detailed analysis of financial performance.
2. Coal Subsector Energy Sector companies that have almost equal market capitalization in recent years.

In Figure 1, of the six issuers that have the largest market capitalization in recent years, two of them, PTBA and ITMG, have almost the same market capitalization value. So, this study makes two issuers in the energy sector of the coal subsector listed on the IDX in 2019-2022 with the largest market capitalization and have capitalization values that tend to be the same as samples, namely PT Bukit Asam (Tbk) and PT Indo Tambangarya Megah (Tbk).

The application of quantitative calculations in analyzing data using financial ratio analysis and Du Pont System analysis of the company's performance under study allows for more effective identification of factors affecting financial performance (Putri, 2021). The first step of the research is to analyze financial ratios, where There are four financial ratios in the form of liquidity ratios, activity ratios, profitability ratios, and solvability ratios (Iswandi, 2022). Each ratio consists of several parts, the liquidity ratio consists of the calculation of the current ratio and cash ratio, and the activity ratio is only in the form of Total Asset Turnover (Saputra, 2022). Meanwhile, the profitability ratio includes the Return on Asset (ROA) and Return on Equity (ROE) ratios (Purba and Mahendra, 2022), the last is the solvability ratio which consists of Debt-to-Equity Ratio (DER), Debt to Asset Ratio (DAR) and long-term DER (Maulita and Tania, 2018).

It is not enough just to calculate financial ratios, researchers also conduct Du Pont analysis by determining several ratios, namely net profit ratio / Net Profit Margin (NPM), total asset turnover / Total Asset Turnover (TATO), Multiplier Equity Ratio (MER), Return on Investment (ROI) and Return on Equity (ROE). So that when the financial ratio analysis technique and Du Pont System analysis of several ratios have been determined, then it is compared with the industry average.

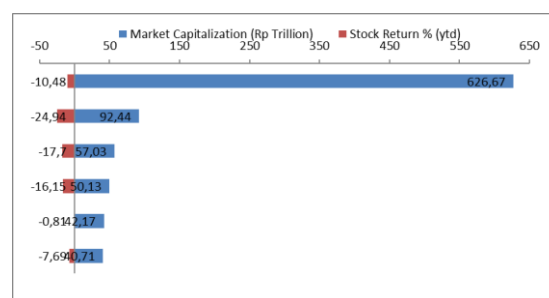


Figure 1. Shares of Coal Issuers with Largest Market Capitalization

III. RESULT AND DISCUSSION

The data presented in the financial statements has a significant role in evaluating the growth of an industry. However, the financial statements presented by the industry must be reprocessed to make it easier for interested parties to read the financial statements, namely by analyzing methods.

To analyze the financial statements of the industry, financial statements consisting of balance sheets and income statements from 2019 to 2022 are needed from the industry, which is the object of research, namely the coal subsector energy sector industry including PT Bukit Asam (Tbk) and PT Indo Tambangarya Megah (Tbk). The data is classified and calculated through ratio analysis listed in the financial ratios and Du Pont System to obtain an evaluation of the industry's performance.

A. Financial Ratio Analysis

Based on financial ratio analysis, the financial performance of an industry is generally measured using liquidity ratios, profitability ratios, activity ratios, and solvency ratios.

Table 1. Financial Ratio Analysis of PTBA and ITMG Ratio Analysis

Ratio Analysis	Issuer	2019	2020	2021	2022
Liquidity Ratio					
Current Ratio	PTBA	2,49	2,16	2,43	2,28
	ITMG	2,01	2,03	2,71	3,26
Cash Ratio	PTBA	1,01	1,12	0,59	0,66
	ITMG	0,68	1,12	1,89	2,44
Activity Ratio					
Total Asset Turnover	PTBA	0,83	0,72	0,81	0,94
	ITMG	1,42	1,02	1,25	1,37
Profitability Ratio					
Return On Asset	PTBA	0,15	0,10	0,22	0,28
	ITMG	0,10	0,03	0,29	0,45
Return On Equity	PTBA	0,22	0,14	0,33	0,44
	ITMG	0,14	0,04	0,40	0,61
Solvency Ratio					
Debt To Equity Ratio	PTBA	0,42	0,42	0,49	0,57
	ITMG	0,37	0,37	0,39	0,35
Debt To Asset ratio	PTBA	0,29	0,30	0,33	0,36
	ITMG	0,27	0,27	0,28	0,26
Long Term DER	PTBA	0,16	0,19	0,18	0,20
	ITMG	0,10	0,12	0,08	0,05

Based on Table 1, the current ratio of PTBA and ITMG in the last four years has not decreased significantly, even though ITMG's current ratio continues to increase from year to year. In contrast to PTBA, which has a tendency for the current ratio value to fluctuate in the last four years. The trend of not too significant an increase or decrease despite the Covid-19 pandemic in 2020 can be due to the company's decision to reduce its liabilities in the face of a pandemic in 2020. As for the cash ratio, both issuers experienced an increase in 2020. ITMG's cash ratio has continued to increase in the last four years, in contrast to PTBA which experienced an increase only in 2020 and 2022. The increase in cash ratio at ITMG in 2021 was due to increased demand and production as well as an increase in the average price of coal which encouraged cash and current assets of several coal-added companies to also increase.

As shown in Table 1, the activity ratio in the form of the total asset turnover ratio decreased due to the Covid-19 pandemic in 2020 when compared to 2019. Although still in the Covid-19 pandemic period, in 2021 the total asset turnover ratio at PTBA and ITMG has increased again. The increase in the value of this ratio is due to an increase in production which follows the increase in the national production target in 2021 in the coal mining sector.

Furthermore, from the calculation results in Table 1, the return on assets (ROA) ratio which is part of the profitability ratio at PTBA and ITMG, both experienced a decline at the beginning of the Covid-19 pandemic,

namely in 2020 and then increased again in 2021 and 2022. The decline in ROA that occurred in the two issuers was in line with the decline in revenue due to the Covid-19 pandemic, while the increase in ROA in 2021-2022 was in line with the increase in coal demand which caused revenue to also increase. Meanwhile, the return on equity (ROE) ratio for the two issuers shows a similar movement pattern as the ROA ratio. Return on equity (ROE) at PTBA and ITMG experienced a significant decline in 2020 but increased again significantly in 2021. The decrease in net profit in 2020 and the increase in net profit in 2021 are the causes of significant changes in the ratio.

The fourth financial ratio discussed in this study is the solvency ratio consisting of Debt-to-Equity Ratio (DER), Debt to Asset Ratio (DAR) and long-term DER. In table 1 above, PTBA and ITMG have a DER ratio value smaller than one, this means that if the company is liquidated, the company will only be able to pay its liabilities using only its equity. In terms of movement, there was no significant decrease or increase in the two issuers. Then for the DAR ratio has a value movement that resembles the DER ratio, which if the DER ratio changes in a positive direction, the DAR ratio will also change in a positive direction. This is because the value of assets and equity in the two issuers does not change significantly. The last discussion is on the long-term DER ratio, where in 2020 the two issuers experienced an increase in this ratio due to an increase in the value of long-term debt but a decrease in equity value so that the amount of long-term debt affects the long-term DER ratio.

B. Du Pont System Analysis

Furthermore, the financial performance of PTBA and ITMG can be done with Du Pont System analysis as measured by net profit ratio/Net Profit Margin (NPM), total asset turnover/Total Asset Turnover (TATO), Multiplier Equity Ratio (MER), Return on Investment (ROI) and Return on Equity (ROE). The following describes the discussion of each calculation of the Du Pont System ratio.

Net Profit Margin can be defined as a ratio that measures the ability of a company to generate net profit from the sale of products or services performed. This ratio is calculated by dividing net profit after interest and tax by the company's total revenue or sales. In this case, Net Profit Margin can provide an overview of the company's operational efficiency in generating net profit from each sale made. The higher the Net Profit Margin, the better the company's performance in generating net profit.

Table 2. Net Profit Margin (NPM) Calculation Results

Issuer	Net Profit Margin (NPM) (%)				Average (%)	Financial Performance
	'19	'20	'21	'22		
PTBA	18.5	13.9	27.5	30.0	22.5	Good
ITMG	7.4	3.2	22.9	33.1	16.6	Not good
Average	13.0	8.5	25.2	31.5	19.6	

Based on Table 2, PTBA has a relatively stable NPM, with significant increases in 2021 and 2022, although a slight decrease in 2020. Overall, PTBA's average NPM in the last 4 years is 22.5%, which can be considered good.

On the other hand, ITMG has a fluctuating NPM, with a significant decrease in 2020, but a considerable increase in 2021 and 2022. However, ITMG's average NPM in the past 4 years is 16.6%, which can be considered unfavorable compared to the industry average NPM of 19.6%.

A good approach to the financial performance of a company can be seen from the average financial performance over the past few years. In this case, the average NPM of the two entities for the last 4 years can be used as a reference. Based on the average NPM, PTBA can be categorized as a company that has good financial performance, while ITMG can be categorized as a company that has poor financial performance.

In evaluating the financial performance of issuers, TATO is one of the ratios used to measure the efficiency of using the company's total assets in generating revenue. The higher the TATO ratio, the more efficient the company is in using its assets to generate revenue. The calculation results are presented in Table 3.

Table 3. Total Asset Turn Over (TATO) Calculation

Issuer	Total Asset Turn Over (TATO)				Average	Financial Performance
	'19	'20	'21	'22		
PTBA	0.84	0.72	0.81	0.94	0.83	Not good
ITMG	1.42	1.02	1.25	1.37	1.27	Good
Average	1.13	0.87	1.03	1.16	1.05	

From the calculation results of Table 3, PTBA's TATO ratio decreased from 2019 to 2020 but rose again in 2021 and 2022. Meanwhile, ITMG's TATO ratio rose from 2019 to 2020, fell in 2021, and rose again in 2022.

In evaluating financial performance based on the average of the two entities, ITMG's financial performance is better than PTBA. This can be seen from ITMG's average TATO which is always above the average TATO of the two entities, except in 2020.

Based on the above evaluation, it can be concluded that PTBA's financial performance is not considered good, while ITMG's financial performance is considered good.

Return on investment (ROI) in the Du Pont system shows the company's ability to generate profits. The calculation results are presented in table 4.

Table 4. Du Pont ROI Calculation Results

Issuer	Du Pont ROI (%)				Average (%)	Financial Performance
	'19	'20	'21	'22		
PTBA	15.5	10.0	22.2	28.2	19.0	Not good
ITMG	10.5	3.3	28.5	45.4	21.9	Good
Average	13.0	6.6	25.4	36.8	20.4	

Based on table 4, PTBA has a fluctuating Du Pont ROI, with a significant decrease in 2020, although a considerable increase in 2021 and 2022. Overall, PTBA's average Du Pont ROI over the past 4 years is 19.0%, which can be considered unfavorable.

On the other hand, ITMG has a Du Pont ROI that also fluctuates, but with a significant increase in 2021 and 2022. Overall, ITMG's average Du Pont ROI over the past 4 years is 21.9%, which can be considered good.

Based on the average Du Pont ROI, ITMG can be categorized as a company with good financial performance, while PTBA can be categorized as a company with poor financial performance.

Du Pont's ROE or Return on Equity is a ratio that describes the company's ability to generate profit or profit from the use of its capital. This ratio reflects how well the company can take advantage of profitable investment opportunities and manage costs effectively.

Table 5. MER Calculation Results

Issuer	Multiplier Equity Ratio (MER)				Average	Financial Performance
	'19	'20	'21	'22		
PTBA	1.4	1.4	1.4	1.5	1.47	Good
ITMG	1.3	1.3	1.3	1.3	1.37	Not good
Average	1.3	1.3	1.4	1.4	1.42	

In calculating Return on Equity (ROE), you can use the results of the Multiplier Equity Ratio (MER) by multiplying the Return on Investment (ROI) by the MER value obtained in table 5.

Based on table 5, PTBA has a stable MER over the past 4 years, with an increase from 1.417 in 2019 to 1.474 in 2022. Overall, PTBA's average MER over the past 4 years is 1.474, which can be considered good.

However, ITMG has a volatile MER, with a significant decline in 2021, although it increases again in 2022. Overall, ITMG's average MER over the past 4 years is 1.369, which is lower than the industry average of 1.421. Therefore, it can be said that ITMG's financial performance in terms of MER is considered unfavorable. Based on the average MER, PTBA can be categorized as

a company that has good financial performance, while ITMG can be categorized as a company that has poor financial performance.

Furthermore, the calculation of ROE is carried out using the MER figures previously obtained in table 5. The calculation of Du Pont ROE can be seen in table 6.

Table 6. Du Pont ROE Calculation Results

Issuer	Du Pont ROE (%)				Average (%)	Financial Performance
	'19	'20	'21	'22		
PTBA	21.9	14.2	33.1	44.2	28.4	Good
ITMG	14.3	4.5	39.6	61.5	30.0	No Good
Average	18.1	9.3	36.4	52.8	29.2	

Based on the results of the Du Pont ROE calculation in table 6, there are differences in financial performance between PTBA and ITMG. In 2019, PTBA recorded a higher Du Pont ROE than ITMG, but in 2020 and 2021, PTBA experienced a decline in performance while ITMG experienced a significant increase in performance. In 2022, PTBA again experienced an increase in performance but was still below ITMG.

Judging from the average, PTBA's performance in generating profits from the capital invested in the company is still quite good with an average Du Pont ROE of 28.4%, although in 2020 there was a significant decline in performance. Meanwhile, ITMG has an average Du Pont ROE of 30.0%, which can be categorized as good performance.

However, when compared to the average Du Pont ROE of both companies, which is 18.1% in 2019 and 9.3% in 2020, it can be said that PTBA has a better performance than the average in 2019 and still maintains good performance in 2020. Meanwhile, ITMG has a much better performance than the average in both years.

Therefore, from the results of the Du Pont ROE calculation and comparison with the average, it can be concluded that ITMG has better financial performance than PTBA. However, PTBA still maintains a good performance, although in some years it experienced a decline in performance. It is important to note that Du Pont's ROE only provides an overview of a company's financial performance and does not provide complete information about the company's financial health and prospects.

IV. CONCLUSION

Based on the analysis of financial ratios and the Du Pont System analysis method during the period 2019 to 2022, a comparison of the financial performance of PTBA and ITMG can be concluded: The results of the financial ratio analysis show that both companies have experienced an increase in the current ratio over the past four years, with a more significant increase occurring in ITMG. However, PTBA experienced fluctuations in the current ratio value. Both companies also experienced an increase in cash ratio in 2020. In addition, the total asset

turnover ratio decreased in 2020 due to the Covid-19 pandemic, but in 2021 it increased due to increased production. The financial performance of the two companies is generally quite good with stable and good ratio values in the profitability ratio. Both companies also have good solvency ratios, with relatively low Debt to Equity Ratio (DER) and Debt to Asset Ratio. Analysis of the financial performance of PTBA and ITMG shows that PTBA has poor financial performance, while ITMG has relatively good financial performance. This can be seen from several financial ratios that have been analyzed, namely TATO, NPM, MER, Du Pont ROI, and ROE. In terms of TATO, PTBA experienced a decline from 2019 to 2020 but rose again in 2021 and 2022. Meanwhile, ITMG's TATO rose from 2019 to 2020, fell in 2021, and rose again in 2022. However, ITMG's average TATO over the past 4 years is better than PTBA's average TATO. In terms of NPM, PTBA has a relatively stable NPM and the average NPM over the past 4 years is considered good. Meanwhile, ITMG's NPM fluctuates and the average NPM over the past 4 years is considered unfavorable compared to the industry average NPM. In terms of MER, PTBA has had a stable MER over the past 4 years and the average MER is considered good, while ITMG has a fluctuating MER, and the average MER is considered unfavorable compared to the industry average. In terms of Du Pont ROI, PTBA has a fluctuating Du Pont ROI, and the average Du Pont ROI over the past 4 years is considered unfavorable. Meanwhile, ITMG has a fluctuating Du Pont ROI, but the average Du Pont ROI over the past 4 years is considered good. In terms of Du Pont ROE, PTBA recorded a higher Du Pont ROE than ITMG in 2019, but in 2020 and 2021, PTBA experienced a decline in performance while ITMG experienced an increase. However, ITMG's average Du Pont ROE over the past 4 years is better than PTBA's average Du Pont ROE. Based on the analysis above, it can be concluded that PTBA needs to make improvements in its financial performance, while ITMG has a relatively good financial performance. Based on these conclusions, there are several suggestions that can be given for the next steps for the company and future research. Although PTBA's performance shows a good Net Profit Margin, it is necessary to improve other performances such as TATO, ROI, and ROE so that they can increase faster in the following years. To achieve this, the company can do benchmarking against similar industries to formulate the right strategy for improving financial performance. This study only involved two companies representing BUMN and private companies, so further research should involve more companies so that the picture obtained can be more complete and represent the average industry in one sector.

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