Analysis of The Dupont System To Assess The Financial Performance of The Company
Case Study of PT. ANTAM Tbk (Persero) Listed on the IDX (Indonesia Stock Exchange) in Period 2021-2023

1st Dwi Dinda Nur'arifah
Bachelor of Accounting
Universitas Pembangunan Panca Budi
Medan, Indonesia
dwidindaarifah11@gmail.com

2nd Dea Putri Amanda
Bachelor of Accounting
Universitas Pembangunan Panca Budi
Medan, Indonesia
deaputriamanda00@gmail.com

3rd Tia Novita Sucipto
Bachelor of Accounting
Universitas Pembangunan Panca Budi
Medan, Indonesia
tianovitasucipto@dosen.pancabudi.ac.id

Abstract— **This study aims to analyse the financial performance of PT. ANTAM (Persero) Tbk which is listed on the Indonesia Stock Exchange (IDX) using the DuPont System approach. This method is used to identify factors that affect Return on Equity (ROE), including Net Profit Margin (NPM), Total Asset Turnover (TATO), and Return on Investment (ROI). The data used is the company's annual financial statements for the period 2021–2023. The results of the analysis show that the company's financial performance has undergone significant changes, mainly influenced by the efficiency of asset use and the ability to generate profits.**

Keyword: Financial Performance, Net Profit Margin (NPM), Total Assets Turnover (TATO), Return On Investment (ROI), Equity Multiplier (EM), and Return on Equity (ROE).

I. INTRODUCTION

The mining industry, especially in Indonesia, has a strategic role in the national economy. PT. Antam (Persero) as one of the largest mining companies in Indonesia, of course, attracts the attention of various parties, ranging from investors, the government, to the wider community. Fluctuations in commodity prices, changes in government policies, and increasingly fierce business competition are challenges for mining companies. To survive and thrive in dynamic conditions, companies need to conduct effective and efficient business management. One important aspect to consider is the company's financial performance. One of the methods that is often used in analysing financial performance is the DuPont System. This method allows for the breakdown of Return on Equity (ROE) into key components, which can provide more detailed insights into the elements that affect a company's performance.

Additionally, analysis using financial ratios such as Net Profit Margin (NPM), Total Asset Turnover (TATO), and Equity Multiplier (EM) can help identify a company's financial strengths and weaknesses. Thus, this study aims to provide a comprehensive overview of the financial performance of PT. ANTAM (Persero) Tbk for the last three years using the DuPont System method.

II. THEORETICAL FOUNDATIONS

Analysis Of Financial Statements

Financial statement analysis is the process of evaluating financial information contained in a company's financial statements to understand its financial condition and operational performance. Financial statements consist of income statements, balance sheets, and cash flow statements. Some of the main objectives of financial statement analysis include:
1. Assess the profitability of the company.
2. Evaluate operational efficiency.
3. Measure the company's ability to meet short-term and long-term obligations.
4. Provide a basis for management and investor decision-making.

DuPont System

The DuPont System method was first introduced by the DuPont company in the 1920s. This method aims to analyse Return on Equity (ROE) by breaking it down into three main components:

1. **Net Profit Margin (NPM):** This ratio reflects the company's efficiency in generating net profit from its total revenue. The higher the NPM, the greater the company's ability to generate profit from each unit of revenue.
2. **Total Asset Turnover (TATO):** TATO measures the extent to which a company's assets are used to generate revenue. This ratio reflects the efficiency of the company in utilising its assets.
3. **Return on Investment (ROI):** ROI is a measure of the performance of an investment that shows how much profit is earned from the investment compared to its initial cost. In other words, ROI is the percentage of return earned from each pound invested.
4. **Equity Multiplier (EM):** EM is a measure of financial leverage that indicates the extent to which a company is using debt to finance its assets. The

higher the EM, the greater the use of debt in the company's capital structure.

5. **Return on Equity (ROE):** ROE is a measure of a company's profitability that shows how efficient the company is in generating profits from the capital owned by shareholders. In other words, ROE measures how well a company's management utilises shareholder funds to generate profits.

Through the DuPont approach, ROE can be calculated as the result of the multiplication of the three components.

The Importance of DuPont System Analysis

DuPont System analysis not only provides an understanding of ROE, but also helps identify key factors that affect profitability and operational efficiency. By understanding each component, management can design more appropriate strategies to improve the company's financial performance. Additionally, investors and stakeholders can use this analysis to make more informed investment decisions.
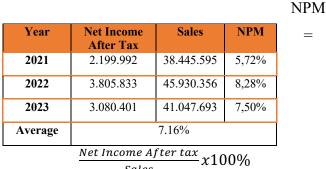
Other Financial Ratios

In addition to the DuPont component, this analysis also uses Return on Investment (ROI) as an additional indicator to measure the efficiency of a company's use of assets in generating net income. ROI provides an overview of how well management is leveraging assets to create value for shareholders.

Factors Affecting the Financial Performance of Mining Companies

The financial performance of mining companies is influenced by various factors, both internal and external, such as: 1) Internal Factors: Business strategy, operational efficiency, cost structure, management quality, and technological innovation. 2) External Factors: Fluctuations in commodity prices, government policies, macroeconomic conditions, business competition, and environmental risks.

Financial Ratio Calculation

*1. **Net Profit Margin (NPM):***

NPM =

Year	Net Income After Tax	Sales	NPM
2021	2.199.992	38.445.595	5,72%
2022	3.805.833	45.930.356	8,28%
2023	3.080.401	41.047.693	7,50%
Average		7.16%	

$$\frac{Net\ Income\ After\ tax}{Sales} x 100\%$$

*2. **Total Asset Turnover (TATO):***

$$TATO = \frac{Total\ Sales}{Total\ Asset} x 1 time$$

*3. **Return on Investment (ROI):***

$$NPM = NPM \text{ x } TATO$$

*4. **Equity Multiplier:***

$$EM = \frac{Total\ Asset}{Total\ Equity}$$

*5. **Return on Equity (ROE):***

$$ROE = \frac{Net\ Profit}{Total\ Equity} x 100\%$$

III. METHOD

This type of research uses descriptive and quantitative research methods. This research is applied research, which is conducted to obtain information that is used as a consideration in solving a problem. The data used is secondary data in the form of the company's financial statements, especially the balance sheet and profit and loss statements. In addition, a descriptive approach is also used to analyse by describing or detailing the data that has been collected as it is and comparing it with the results of the researcher's observations that provide conclusions on the results of the analysis.

Thus, the quantitative approach means a form of data analysis in the form of numbers using statistical calculations. The population of this study is companies listed on the Indonesia Stock Exchange (IDX), namely, PT. ANTAM (Persero) Tbk. The data analysis technique used in this research is quantitative data analysis using Du Pont system analysis.

IV. RESULT AND DISCUSSION

Financial Statements of PT. ANTAM (Persero) Tbk in 2021-2023 (in millions of rupiah)

DESCRIPTION	2021	2022	2023
Net Income After Tax	2.199.992	3.805.833	3.080.401
Sales	38.445.595	45.930.356	41.047.693
Total Asset	32.916.154	33.637.271	42.851.329
Total Equity	20.837.098	23.712.060	31.165.670

Source:: Financial Statements of PT. ANTAM (Persero)

Tbk in 2021-2023 (in millions of rupiah) (www.idx.co.id)

a. **Determining the Net Profit Margin (NPM) value of Antam companies in 2021-2023.**

Source: *Data processed, 2025*

Based on the data you provided, the Net Profit Margin (NPM) has been calculated for PT. Antam (Persero) Tbk during the 2021-2023 period. The results of the calculation show an increasing trend of NPM from year to year. In 2021, the NPM

was 5.72%, in 2022, the NPM increased to 8.28%, in 2023, the NPM increased again to 7.50% and the average NPM for the three years was 7.16%. The increase in NPM from year to year indicates that PT. Antam (Persero) Tbk experienced an increase in profitability performance. This means that the company is more efficient in managing costs so that it can generate a greater profit from every rupiah sold.

b. Determining the Total Asset Turnover (TATO) at PT. ANTAM in 2021-2023.

Year	Sales	Total Asset	TATO
2021	38.445.595	32.916.154	1,16 kali
2022	45.930.356	33.637.271	1,36 kali
2023	41.047.693	42.851.329	0,95 kali
Average		1,15 kali	

Source: *Data processed, 2025*

Based on the data provided, it can be seen that the TATO value fluctuates at PT. Antam (Persero) Tbk during the 2021-2023 period:

1. 2021: 1.16 tattoos. This means that every rupiah of assets owned by the company can generate income of IDR 1.16.
2. 2022: TATO increased to 1.36 times, indicating an increase in efficiency in asset use.
3. 2023: TATO decreased to 0.95 times, which means that the efficiency of asset use has decreased compared to the previous year.
4. Average: A tattoo for three years is 1.15 times. Increased Efficiency (2021-2022).
5.

The increase in TATO from 2021 to 2022 shows that PT. Antam (Persero) Tbk has succeeded in increasing efficiency in the use of its assets.

c. Determining Return On Investment (ROI) in PT. ANTAM in 2021-2023.

Source: *Data processed, 2025*

Based on the data provided, it can be seen that the ROI value fluctuations in PT. Antam (Persero) Tbk during the 2021-2023 period:

1. 2021: ROI of 6.63%.
2. 2022: ROI increased to 11.26%, indicating a significant increase in return on investment.
3. 2023: ROI drops to 7.12%, although still higher than in 2021.
4. Average: The ROI over three years is 8.33%.

The increase in ROI from 2021 to 2022 shows that the investment made by PT. Antam in 2022 gave better results compared to the previous year. Meanwhile, a decrease in ROI in 2023 indicates a decline in investment performance.

d. Determining the Equity Multiplier (EM) at PT. ANTAM in 2021-2023.

Year	Total Asset	Total Equity	EM
2021	32.916.154	20.837.098	1,57 kali
2022	33.637.271	23.712.060	1,41 kali
2023	42.851.329	31.165.670	1,37 kali
Average		1,45 kali	

Source: *Data processed, 2025*

Based on the data provided, it can be seen that the EM value fluctuations in PT. Antam during the 2021-2023 period:

1. 2021: EM by 1.57 times. This means that around 63.7% of the company's total assets are financed by equity (own capital) and the rest (36.3%) is financed by debt.
2. 2022: EM drops to 1.41 times. This shows that the proportion of financing through debt has decreased compared to the previous year.
3. 2023: EM increased slightly to 1.37 times, but still lower than in 2021.
4. Average: EM over three years is 1.45 times.

The fluctuation in the EM value shows that the capital structure of PT. Antam has changed from time to time, where in general, the trend of EM PT. Antam tends to decline, which means the company is increasingly reducing its reliance on debt to finance its assets.

e. Determining Return On Equity (ROE) at PT. ANTAM in 2021-2023

Year	NPM	TATO	ROI
2021	5,72%	1,16 kali	6,63%
2022	8,28%	1,36 kali	11,26%
2023	7,50%	0,95 kali	7,12%
Average		8,33%	

Year	ROI	EM	ROE
2021	6,63%	1,57 kali	10,40%
2022	11%	1,41 kali	15,87%
2023	7,12%	1,37 kali	9,75%
Average		12%	

Source: *Data processed, 2025*

Based on the data provided, it can be seen that the ROE value fluctuates in PT. Antam during the 2021-2023 period:

1. 2021: ROE of 10.40%.
2. 2022: ROE increased to 15.87%, indicating a significant increase in returns for shareholders.
3. 2023: ROE fell to 9.75%, although still higher than in 2021.

4. Average: ROE for three years is 12%.

The increase in ROE from 2021 to 2022 shows that the investments made by shareholders in 2022 gave better results compared to the previous year.

Results of the calculation of the DuPont System method:

Based on research that has been carried out to determine the performance of financial statements at PT. ANTAM (Persero) Tbk. for the 2021-2023 period, the results of data processing have been obtained which will be presented in the form of tables. The following is a table that summarises the results of the research on the performance of financial statements at PT. ANTAM (Persero) Tbk. for the 2021-2023 period using the Du Pont System Method:

DESC	2021	2022	2023	Average
NPM	5,72%	8,28%	7,50%	7,16%
TATO	1,16 kali	1,36 kali	0,95 kali	1,15 kali
ROI	6,63%	11,26%	7,12%	8,33%
EM	1,57 kali	1,41 kali	1,37 kali	1,45 kali
ROE	10,40%	15,87%	9,75%	12%

Source: *Data processed, 2025*

V. Conclusions and Suggestions

Based on the table of the calculation results of the Du Pont System Analysis for PT. ANTAM (Persero) Tbk. for the 2021-2023 period, we can see several trends and indicators of the company's performance:

a) **Net Profit Margin (NPM):** In general, NPM shows an increase year-on-year, indicating that the company is becoming more efficient in managing costs and generating profit from every rupiah sold.

b) **Total Asset Turnover (TATO):** TATO has fluctuated, with a decline in 2023. This could indicate that the company is less effective in utilising its assets to generate sales in that year.

c) Return on Investment (ROI): ROI also shows an upward trend, in line with the increase in NPM. This means that the investments that companies make generate better returns.

d) Equity Multiplier (EM): EM tends to decline, indicating that the company is increasingly relying on equity as opposed to debt to finance its operations.

e) Return on Equity (ROE): ROE also shows an improvement, indicating that company owners are getting a higher return on their investments.

From the results of the analysis, here are some suggestions and conclusions that can be drawn:

a) Overall, the financial performance of PT. ANTAM (Persero) Tbk. showed an improvement trend, especially in terms of profitability. Increased NPM and ROI indicate that companies are becoming more efficient in managing operations and generating profits.

b) Although profitability is increasing, the decline in TATO in 2023 is worth noting. The company needs to further evaluate the use of its assets.

c) The decline in EM indicates that the company is increasingly dependent on its own capital. This is a healthy condition, but it needs to be maintained so as not to reduce the company's financial flexibility too much.

d) This Du Pont System analysis provides an overview of the company's financial performance.

e) Comparing the performance of PT. ANTAM (Persero) Tbk. with similar companies in the same industry will provide a clearer picture of the company's competitive position.

References

[1] Anggraini, D. S., & Arifin, S. (2023). Analisis Du Pont System dengan Time Series Analysis untuk Mengukur Kinerja Keuangan PT Widmarine Jaya Lines Tahun 2019-2022. *Mufakat: Jurnal Ekonomi, Manajemen dan Akuntansi*, 2(5), 455-463.

[2] Habeahan, F., Tarigan, A. S. P., & Aryza, S. (2022). AN ANALYSIS OF HOUSE CONNECTION NETWORK CONTROL SHOP ON ENERGY LOSS USING PT PLN (PERSERO) ULP STABAT FORMULA JOGJA. *INFOKUM*, 10(03), 263-269.

[3] Halawa, E. N., Milanie, F., Sembiring, D. P. B., Situmorang, C. Y., Aldito, A. A., & Zebua, W. (2024). ANALYSIS OF THE GREEN LANE IN GAJAH MADA PARK IN MEDAN CITY AS A PUBLIC OPEN SPACE AND DEVELOPMENT EFFORTS A SUSTAINABLE FUTURE. *Bulletin of Engineering Science, Technology and Industry*, 2(2), 96-105.

[4] Hardiyanti, H., Kuncara, T., & Sussanto, H. (2022). Analysis Of Company Financial Performance Using Du Pont System Method At Pt. Aneka Tambang (Persero) During The Pandemic And Before The Covid-19 Pandemic. *International Journal Management and Economic*, 1(2), 32-38.

[5] Jonathan, E., Selomitha, N. S. E., Putri, T. L., Andini, S., & Pratiwi, S. E. (2024). Analisis Du Pont pada Laporan Keuangan PT. Nippon Indosari Corpindo Tbk Tahun 2022-2023. *Jurnal Locus Penelitian dan Pengabdian*, 3(6), 496-501.

[6] Movizar, R., & Hawadah, N. (2023). ANALISIS DU PONT SYSTEM UNTUK MENILAI KINERJA KEUANGAN PADA PT INDOFOOD SUKSES MAKMUR TBK PERIODE 2014-2016. *Jurnal Akuntansi dan Manajemen Bisnis*, 3(1), 163-173.

[7] Muhlishoh, K. (2022). Penilaian Kinerja Keuangan Dengan Menggunaka Analisis Du Pont System (Studi Kasus PT. Pertamina (Persero) Tahun 2016-2020). *JOEL: Journal of Educational and Language Research*, 1(9), 1347-1358.

[8] Sanny, A., & Yanti, E. D. (2019). Du Pont Analysis Integrative Approach to Ratio Analysis at PT. Federal International Finance. *International Journal of Research & Review*, *6*(11).

[9] Siregar, A., Marlina, L., Iqbal, M., & Siahaan, A. P. U. (2024). COMPARATIVE ANALYSIS OF NAIVE BAYES ALGORITHM AND C4. 5 ALGORITHM IN SELECTING TYPES OF UMKM PRODUCTS IN BBPSDMP KOMINFO MEDAN TRAINING. *Bulletin of Engineering Science, Technology and Industry*, *2*(3), 239-249.

[10] Susanto, A., Putra, D. S., Suprihatin, E., Indrawan, I., & Sunardi, N. (2023). Analisis Du Pont System Untuk Menilai Kinerja Keuangan Perusahaan:(Studi Kasus Perusahaan Makanan Dan Minuman Yang Terdaftar Di Bei Periode 2018-2022). *Neraca: Jurnal Ekonomi, Manajemen Dan Akuntansi*, *1*(3), 217-226.

[11] Susanty, Z., & Sunardi, N. (2023). Du Pont System Analysis In Assessing Company Financial Performance (Study on the LQ 45 Index Listed on the IDX Year 2018-2022). *Indonesian Development of Economics and Administration Journal*, *2*(2), 134-165.

[12] Tobing, V. C. L., & Simatupang, E. M. (2024). ANALISIS DUPONT SYSTEM DALAM MENGUKUR KINERJA KEUANGAN PERUSAHAAN PADA PT KERETA API INDONESIA (PERSERO). *Aktiva: Jurnal Akuntansi dan Investasi*, *9*(2), 99-112.

[13] Wahidullah, W., & Istiqomah, I. (2023). Is The Dupont System Method Can Analyze Financial Reports?. *Jurnal Ekonomi Dan Perbankan Syariah*, *11*(2), 133-145.