

**ASSESSMENT OF FINANCIAL PERFORMANCE IN SOE BANK  
USING THE DUPONT SYSTEM METHOD PERIOD 2019-2021**

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**Abstract**

*Appraisal of a company's performance can be observed from both financial and non-financial perspectives. This study specifically measures financial performance by focusing on the DuPont System analysis. The DuPont system divides performance into three components: net profit margin, rate of return on assets, and rate of return on equity/capital. However, this study only considers two components of the DuPont System, namely return on assets and net profit margin. This research is of a quantitative nature with a descriptive approach. The data analyzed is derived from the financial statements of all state-owned banks, particularly the financial position statements and annual comprehensive income statements from December 31, 2019, to December 31, 2021. The results of the study indicate that, among the four banks, Bank Rakyat Indonesia (Persero) Tbk exhibits the best financial performance, while Bank Tabungan Negara (Persero) Tbk displays the lowest financial performance.*

**Keywords:** Du Pont System, NPM, ROA, TATO

## 1. INTRODUCTION

Developments in the business world are increasingly stringent. Especially in the world of banking. The bank has a role as a trusted institution for the community. Therefore, Bank Indonesia undertook a consolidation process for Indonesian banking with the aim of increasing the resilience and health of banks in the long term, creating financial system stability and encouraging sustainable national economic growth (Ariyanto, 2004). This is done because the community is one of the parties that has a big role in the banking industry of a country.

The community has a very important role in a banking process, so that the public has the right to know all forms of information regarding the financial performance of an institution in terms of prioritizing the principle of prudence in choosing a financial institution (Mahmudi, 2015). Therefore, banks must be able to manage and utilize their resources in measuring their financial performance (Bahri et al., 2022).

The audited financial statements will serve as an overview for stakeholders in assessing the company's performance (Subramanyam, 2014). To assess the company's performance, it is necessary to carry out analyzes through financial reports (Konwar, 2023). The results of the analysis will be better when compared to previous years. There are several analytical methods that can be used. One way is to use the Du Pont System method.

Financial statement analysis is a process of decomposing data (information) contained in financial reports into separate components, examining each of these components using certain analytical techniques in order to obtain a proper understanding and a comprehensive picture of the information (Kasmir, 2018). Performance measurement in this study will use the Du Pont System analysis. Specifically, the

measurement of financial performance with the DuPont system places more emphasis on calculating the components contained in the income statement and the company's statement of financial position (Dewi, 2018).

The Du Pont System, which was developed by F. Donaldson Brown of the DuPont Corporation, is a financial analysis tool specifically designed for General Motors (Loppies & Sagitaputra, 2020). This system provides a comprehensive assessment of the company's financial performance by examining various key factors. One of the significant aspects analyzed by the Du Pont System is the company's level of efficiency in utilizing its resources. This includes assessing how effectively General Motors manages its assets, such as inventory, property, and equipment, to generate revenue and achieve profitability. By evaluating the efficiency of these operational resources, the Du Pont System helps identify areas where improvements can be made to enhance overall performance.

In addition to efficiency, the Du Pont System also considers other crucial financial indicators. It examines the profitability of General Motors by analyzing the company's net income in relation to its sales revenue. This profitability analysis provides insights into the company's ability to generate profits from its core operations and indicates its financial health. Moreover, the Du Pont System delves into General Motors' financial leverage, which assesses the extent to which the company relies on borrowed funds to finance its operations. By evaluating the proportion of debt in the capital structure, this analysis helps determine the financial risk associated with the company's overall debt burden.

Furthermore, the Du Pont System examines the company's overall return on investment (ROI), which measures the profitability of the investments made by General Motors. It assesses the company's ability to generate returns from the capital invested in its operations, highlighting its efficiency in generating profits relative to the amount of capital employed (Agustin, 2020). By considering these key financial indicators, the Du Pont System offers a comprehensive analysis of General Motors' financial performance. This evaluation allows for a deeper understanding of the company's efficiency, profitability, leverage, and return on investment, enabling informed decision-making and the identification of areas for improvement in financial management.

Table 1 presents the financial data conditions of state-owned enterprise (BUMN) banks in Indonesia for the years 2019, 2020, and 2021. The table includes the names of the banks, their profit figures, and their asset values, all stated in millions of Indonesian Rupiah (Rp).

**Table 1. State-Owned Enterprise Banking Financial Data Conditions in Indonesia  
(In Millions of Rupiah)**

Company name	2019 (Profit & Assets)	2020 (Profit & Assets)	2021 (Profit & Assets)
Bank BNI	Rp. 15,508,583	Rp. 3,321,442	Rp. 10,977,051
	Rp. 845605208	Rp. 891,337,425	Rp. 964,837,692
Bank BRI	Rp. 34,413,825	Rp. 18,660,393	Rp. 30,333,354
	Rp. 1,416,758,840	Rp. 1,610,065,344	Rp. 1,661,812,836
Bank BTN	Rp. 209,263	Rp. 1,602,358	Rp. 2,376,227

	Rp. 311,776,828	Rp. 361,208,406	Rp. 2,371,868,311
Mandiri Bank	Rp. 28,455,592	Rp. 18,398,928	Rp. 30,551,097
	Rp. 1,318,246,335	Rp. 1,541,964,567	Rp. 1,725,611,128

Source :www.idx.co.id, 2023

When conducting a financial statement analysis, there are various methods available, one of which is the Du Pont System method. This particular approach provides insights into the different factors that influence a company's financial performance. It serves as a valuable analytical tool for examining the interrelationship between Return on Investment (ROI), Asset Turnover, and Net Profit Margin (NPM) (Loppies & Sagitaputra, 2020).

The objective of this study is to assess the financial performance of banking companies in Indonesia that fall under the umbrella of BUMN (State-Owned Enterprises) using the Du Pont System method for the period from 2019 to 2021. This analysis will primarily utilize the Net Profit Margin (NPM) ratio to evaluate the effectiveness of cost control and revenue generation within these companies. Additionally, the research aims to gauge the efficiency of the companies in utilizing their assets by employing the Return on Assets (ROA) ratio.

By utilizing the Du Pont System method, this study seeks to offer a comprehensive evaluation of the banking companies' financial performance. It will shed light on their ability to control costs effectively, convert assets into revenue efficiently, and generate satisfactory returns on investment. The findings of this analysis will provide valuable information for decision-making and potential areas of improvement in financial management within these BUMN banking entities.

## 2. RESEARCH METHODS

The type of research used in this research is descriptive research with a quantitative approach. The data analyzed comes from the financial statements of banking companies registered with BUMN, namely Bank BNI, Bank BRI, Bank BTN, and Bank Mandiri, especially in the statements of financial position and annual comprehensive income statements ending December 31 2019 to December 31 2021.

Bank Indonesia sets financial performance standards as stipulated in Bank Indonesia regulation no. 6/10/PBI/2004, as follows:

**Table 2. Standard Ratio Based on Bank Indonesia Regulations**

	<b>Bank Indonesia Standard</b>	<b>Not good</b>	<b>Good</b>	<b>Very good</b>
NPM (%)	3% - 9.5%	≤0% - 3%	≥ 3.1% - 9.5%	≥ 9.6%
TATTOO	2 times	≤ 2 Times	≥ 2 Times	≥ 2 Times
ROA (%)	0.5% - 1.25%	≤ 0% - 0.5%	≥ 0.6% - 1.25%	≥ 1.26%

Source: Bank Indonesia regulations, data to be processed in 2023

The first step in measuring performance using the DuPont System is calculating the Net Profit Margin to determine the level of profitability of the company's sales and Total Asset Turnover which measures the effectiveness of the company in using assets. The

two calculations (Net Profit Margin and Total Asset Turnover) produce the DuPont Formula. DuPont Formula can be described with a mathematical equation, as follows

$$\text{ROA} = \text{Net Profit Margin} \times \text{Total Asset Turnover}$$

From this formula, Net profit Margin shows the percentage of net profit owned by the company compared to operational income. The calculation result of total asset turnover shows how much income the company earns with the company's assets. So that ROA will change when there is a change in the increase or decrease in company profits and or the turnover rate of company assets. It can be concluded that the greater the ROA, the more efficient the company is in using assets to earn income.

The scheme for Du Pont System analysis is as follows:

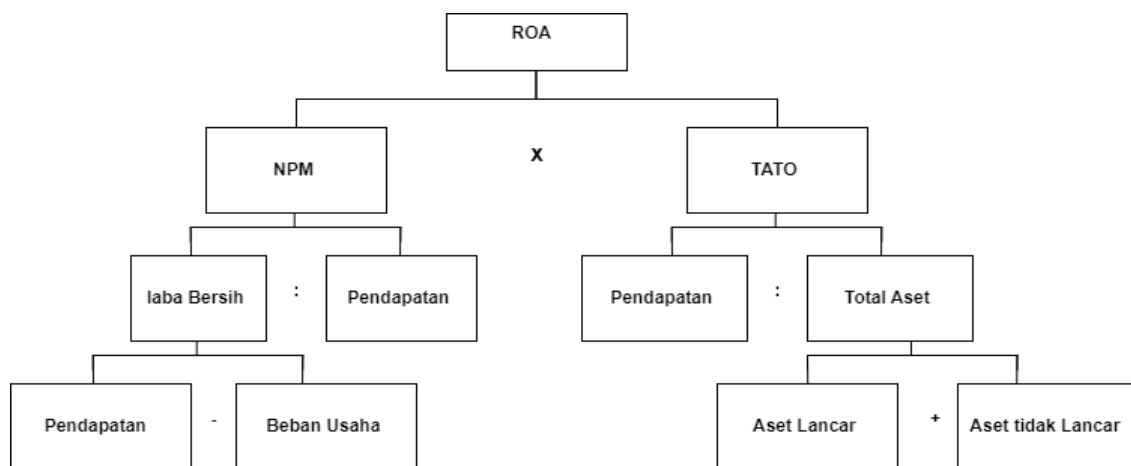


Figure 1. Du Pont System Analysis Framework

Source: Sari & Ellyawati (2019)

### 3. RESULTS AND DISCUSSION

#### 3.1. Research Results

Based on the description, the research then conducts an analysis on BUMN Banking for the 2019-2021 period. The following is the result of calculating the ratio of state-owned banks.

a) Bank Negara Indonesia (Persero) Tbk

Table 3. Recapitulation of Bank BNI Du Pont System Rate Calculation Period of 2019-2021

Ratio	Year			Industry Average	BI standard	Description
	2019	2020	2021			
NPM (%)	19.77	4.43	15.21	13.13	3% - 9.5%	Very good
TATTOO	0.092	0.084	0.074	0.25	2 times	Not good
ROA (%)	1.818	0.372	1.125	1.105	0.5% - 1.25%	Good

Source: Data processed in 2023

Net Profit Margins (NPM) shows the percentage of net profit earned by a bank compared to its operating income (Rodoni & Ali, 2010). It can be seen from the table that NPM for Bank BNI from 2019 to 2020 has decreased quite significantly. This is influenced by the occurrence of the Covid-19 case which is endemic throughout the world, including Indonesia in 2019 to 2020. Likewise, the percentage of ROA has also decreased from 2019 to 2020. However, the two ratios used in this study, everything has increased again in the following year, namely 2021.

ROA is very useful in providing information about how big the percentage of net profit is when compared to the total assets owned by the bank. The higher the ROA of a company, the better the profit growth for the company. Even though the ROA and NPM obtained by Bank BNI have decreased in 2020, the industry average obtained is still at the standard set by Bank Indonesia.

b) Bank Rakyat Indonesia (Persero) Tbk

**Table 4. Recapitulation of Bank BRI Du Pont System Level Calculation Period of 2019-2021**

Ratio	Year			Industry Average	BI standard	Description
	2019	2020	2021			
NPM (%)	22,1	10.36	15,82	16.09	3% - 9.5%	Very good
TATTOO	0.109	0.111	0.115	0.111	2 times	Not good
ROA (%)	2,629	1,149	1,819	1.655	0.5% - 1.25%	Very good

Source: Data processed in 2023

Net Profit Margin (NPM) shows the percentage of net profit earned by a bank compared to its operating income. It can be seen from the table that the NPM for Bank BRI has significantly decreased from 2019 to 2020. This decline is influenced by the occurrence of the Covid-19 pandemic, which affected the global economy, including Indonesia, during 2019 to 2020. However, both the NPM and ROA percentages have increased again in the following year, 2021.

Return on Assets (ROA) is a useful metric that provides information on the percentage of net profit in relation to the total assets owned by a bank. A higher ROA indicates better profit growth for the company. Based on the standards set by Bank Indonesia, the industry average NPM and ROA obtained by Bank BRI are at a very good level.

c) Bank BTN (Persero) Tbk

**Table 5. Recapitulation of Bank BTN Du Pont System Calculations for the 2019-2021 period**

Ratio	Year			Industry Average	BI standard	Description
	2019	2020	2021			
NPM (%)	0.751	5.79	8.39	4.97	3% - 9.5%	Good
TATTOO	0.089	0.076	0.115	0.093	2 times	Not good
ROA (%)	0.066	0.44	0.637	0.381	0.5% - 1.25%	Not good

Source: Data processed in 2023

Net Profit Margin (NPM) shows the percentage of net profit earned by a bank compared to its operating income. It can be observed from the table that Bank BTN's NPM has consistently increased from 2019 to 2021. This indicates that Bank BTN has been able to effectively manage its revenue and net profit, even during the challenging year of 2020 when many companies faced declines due to the Covid-19 outbreak. Similarly, the ROA percentage has also increased year by year.

Return on Assets (ROA) is a valuable metric that provides information on the percentage of net profit in relation to the total assets owned by a bank (Syamsuddin, 2011). A higher ROA signifies better profit growth for the company. Despite Bank BTN's consistent increase in NPM and ROA each year, according to the standards set by Bank Indonesia, the industry average for Bank BTN still falls below the standard. Consequently, Bank BTN's performance is assessed as "not good".

d) Bank Mandiri (Persero) Tbk

**Table 6. Recapitulation of Bank Mandiri Du Pont System Level Calculations for the Period of 2019-2021**

Ratio	Year			Industry Average	BI standard	Description
	2019	2020	2021			
NPM (%)	21.89	13,3	20,91	18,7	3% - 9.5%	Very good
TATTOO	0.098	0.089	0.084	0.09	2 times	Not good
ROA (%)	0.185	1,187	1,756	1.042	0.5% - 1.25%	Good

Source: Data processed in 2023

Net Profit Margin (NPM) shows the percentage of net profit earned by a bank compared to its operating income. It can be observed from the table that Bank Mandiri experienced a significant decrease in NPM from 2019 to 2020, influenced by the global Covid-19 pandemic that affected Indonesia and other countries. However, Bank Mandiri managed to increase its NPM in 2021. Conversely, the ROA percentage continues to increase year by year (Dewi, 2018).

Return on Assets (ROA) is a valuable metric that provides information on the percentage of net profit in relation to the total assets owned by a bank. A higher ROA indicates better profit growth for the company. According to the standards set by Bank Indonesia, Bank Mandiri's NPM is rated very well as it exceeds the statutory standard. As for ROA, it is rated as good.

### 3.2. Discussion

Financial performance serves as the outcome of a company's efforts and is used to assess the growth and development potential of a company (Hery, 2018). A company is considered successful if it achieves the standards and goals set by the company itself. This performance evaluation can be conducted by comparing the profitability ratios with the industry averages and standards established by Bank Indonesia (Citra et al., 2021).

a) Bank BNI

In 2020, Bank BNI experienced a decrease in ROA. It is known that ROA is influenced by NPM and TATO. NPM is derived from net profit and revenue, while TATO is derived from income and total assets (Nurdin & Firmansyah, 2020). Hence, the decline

in revenue and net profit in 2020 affected the ROA of Bank BNI. The reduction in income can be attributed to the global impact of the Covid-19 pandemic, including in Indonesia. However, in 2021, Bank BNI managed to increase its revenue and control the rate of net profit. This can be observed in Table 3, where Bank BNI achieved the standard set by Bank Indonesia.

b) Bank Rakyat Indonesia

Similarly, in 2020, Bank BRI also experienced a decline in ROA. ROA is influenced by NPM and TATO, where NPM is derived from net profit and revenue, while TATO is derived from income and total assets. Consequently, the decrease in revenue and net profit in 2020 had an impact on the ROA of Bank BRI. The decline in income can be attributed to the global impact of the Covid-19 pandemic. However, in 2021, Bank BRI managed to increase its revenue and control the rate of net profit. This can be seen in Table 4, where Bank BRI achieved industry standards in accordance with the provisions of Bank Indonesia.

c) Bank BTN

Bank BTN stands out by consistently increasing its net profit year after year. Unlike Bank BNI and Bank BRI, Bank BTN shows greater productivity in generating revenue and net profit. While other banks experienced a decrease in ROA in 2020, Bank BTN was able to increase its ROA, a trend that continued until 2021. However, despite the continuous increase in ROA, Table 5 shows that Bank BTN has not yet reached the industry standard set by Bank Indonesia.

d) Mandiri Bank

Similarly, Bank Mandiri experienced a decrease in ROA in 2020 due to a decline in revenue and net profit. The decrease was influenced by the global impact of the Covid-19 pandemic. However, Bank Mandiri was able to recover and increase its income in 2021. This improvement is evident in Table 6, where Bank Mandiri's industry average is classified as good according to the standards set by Bank Indonesia.

#### **4. CONCLUSION**

Based on the results of the research that has been done, the research concludes as follows. First, to measure financial performance using the DuPont System, related ratios can be used, namely, Net Profit Margin, Return On Assets (ROA), and Return On Equity (ROE). But in this study, the ratio used is only ROA and NPM. Second, of the four state-owned banks operating in Indonesia, Bank BRI is the bank with the best financial performance conditions because the NPM and ROA calculation results continue to be at the standards set by Bank Indonesia. Meanwhile, Bank BTN has the lowest financial performance because it does not reach the standards set by Bank Indonesia. Despite having a low industry average.

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