

Profitability Determinants in State Owned Companies: Evidence from Indonesia Stock Exchange 2017-2021

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Abstract—This research aims to analyze the influence of leverage, liquidity, company size, and sales growth on State-Owned Enterprises (BUMN) listed on the IDX during the period 2017-2021. The leverage variable is proxied by the debt-equity ratio, liquidity is proxied by the current ratio, company size is proxied by the natural logarithm of total assets, sales growth is measured by the change in revenue over a specific period, and profitability is measured using ROA. The population used in this study consists of State-Owned Enterprises listed on the IDX during the period 2017-2021, totaling 28 companies. Using purposive sampling technique, 21 companies were selected as samples. This research adopts a quantitative approach. The data used in this study are secondary data. The data analysis method includes descriptive and panel data regression analyses using Stata version 15. The results of this study prove that leverage has a negative significant effect on profitability. Liquidity has a positive but not significant effect on profitability. Company size has a positive significant effect on profitability, while sales growth has a negative but not significant impact on profitability.

Keywords— Profitability, Leverage, Liquidity, Company Size and Sales Growth.

I. INTRODUCTION

A company's financial performance reflects how it manages its financial resources to achieve its goals and conduct its operations. Therefore, it is essential to continuously discuss and pay attention to financial performance by the company's internal stakeholders and external parties such as investors, creditors, regulators, and the general public (Dewi, 2018). According to Altman (1968), financial ratio analysis can be one way to analyze a company's financial performance. Company ratio analysis is divided into five groups: market value, liquidity, profitability, debt management, and asset management (McLaren & Struwig, 2019). Among these five types of ratio analysis, profitability ratios are crucial for a company as the heart of the company depends on how much profit the company can generate (Hirdinis, 2019).

Profit is essential for owners, creditors, and management as it can influence the market share and the company's revenue (Olaoye & Olarewaju, 2015). State-Owned Enterprises (called BUMN) play an important role in Indonesia. BUMNs, as State-Owned Companies, are expected to maintain their financial performance and management health (Siagian et al., 2020). State-Owned Enterprises (BUMN in bahasa), as public companies with State Equity Participation, are intended to be companies that provide high-quality goods and services to compete in both the domestic and international markets. Their

main objective is to pursue profits to enhance the company's value (Nachrawi, 2022). Most of the large State-Owned Enterprises (SOEs) are under the administration of the central government, enabling these companies to maintain certain privileges, particularly in government-supported financing, subsidies, procurement, and regulations. Additionally, SOEs are becoming more profitable due to their monopoly positions rather than efficiency improvements (Song et al., 2011).

Sourced from state-owned financial reports, since 2017 to 2021, the average Debt Equity Ratio (DER) as a proxy for leverage was above 2 or 200%. This means that State-Owned Companies listed on the Indonesia Stock Exchange from 2017 to 2021 were highly vulnerable to various risks. One example of such risk is the sentiment surrounding the increase in bank interest rates and the depreciation of the Indonesian rupiah against the US dollar. Data indicates a mismatch between the financial performance data of State-Owned Enterprises and existing theories, such as the signaling theory. As per signaling theory, employing high leverage in a company's capital structure can convey a negative signal regarding its profitability (Wiwattanakantang, 1999). When a company carries substantial debt, it may be perceived as being at a higher risk of default, leading to decreased stakeholder confidence in its capacity to generate profits. However, the data shows that in 2018, there was an 81.64% increase in the Debt Equity Ratio (DER) accompanied by a 2.25% increase in Return on Asset (ROA). According to the data, it also shows inconsistency in the average profitability of State-Owned Companies from 2017-2021. So, any factors that can affect its profitability need to be examined in relation to profitability.

Based on the above, the researcher conducted a study titled "Profitability Determinants in State-Owned Companies: Evidence from Indonesia Stock Exchange 2017-2021". Through this study, the researcher aims to contribute to understanding financial statement users regarding the factors that affect profitability

II. LITERATUR REVIEW AND HYPOTHESIS

Signaling theory was initially developed by Spence (1973), who explained how companies provide signals to users of financial statements. Signals can refer to actions or decisions the company or its management takes that provide information to investors or other external parties about the company's performance or prospects (Gumanti, 2009). The company's

signals can indicate growth projections, profitability, future cash flows, and investment feasibility for investors (Hartono, 2015). Miller (2002) revealed that companies with high profits usually rely on competitive advantages through more and better communication in the form of signals to the market.

Sopian & Mulya (2018) explained that companies can signal to users of financial and non-financial information (such as investors, creditors, customers, and government) about the quality and potential performance of the company. These signals consist of information about what the company's management has done or implemented to achieve the owner's goals, generally maximizing the company's profits. The information presented by the company usually includes financial statements, footnotes, management analysis, and others (Healy & Palepu, 2001). The goal of providing these signals is to convince external parties about the profits earned and disclosed by the company (Chan et al., 2019). Especially for external parties who have a limited understanding of financial statements, the hope is that through these signals, they can utilize the information provided by management and financial ratios to assess the company's prospects (Alfahruqi et al., 2020).

Company profitability measures an organization's achievements (Adetayo, 2013). Company profitability measures gauge an organization's benchmarks and financial objectives (Kwatiah & Asiamah, 2020). Murthy and Sree (2003) explain that a company's profitability ratio is the ability to leverage operational and investment decisions and strategies to achieve financial stability. Profitability is a company's capacity to achieve earnings or indicators of managerial efficiency (Wiagustini, 2014). Riyanto (2001) adds that a company's profitability reflects the comparison between generated profit and the assets or equity used to generate that profit, profitability results from policies and decisions made by the company's management (Haryanto, 2016).

Profitability is a benchmark for assessing managerial efficiency based on the return generated from loans and investments (Adyani & Sampurno, 2013). Companies with good levels of profitability prove their promising prospects, ensuring the company's sustainability and growth. For a company to sustainably continue its operations or business, it will always strive to generate profit (Dahrani, 2020). In literature, a wide range of measures are used to measure a company's financial performance, including profitability, liquidity, and debt (Reid & Joshua, 2004). Bradley & Moles (2002) demonstrate that the primary goal of any organization is profit maximization; therefore, profitability measures are widely used compared to other measures. The benchmark for company profitability in this study is measured through ROA. Rasjo (2007) explains in his research that, theoretically, there are variables suitable for measuring ROA by prudential operation principles. These variables include profit margin, sales growth, debt (measured through total debt compared to total assets or compared to equity), and dividends (calculated using dividend ratios).

Nugroho (2014) stated that companies with high leverage levels may face bankruptcy if they cannot pay their short-term debts, leading to difficulties in obtaining loans in the future.

Debt held by the company triggers fixed interest burdens, and if not managed well, leverage can lead to a decrease in profitability (Riyantina & Ardiansari, 2017). Then signaling theory can explain the relationship between liquidity and profitability (Bata et al., 2022). Trisnayanti & Wiagustini (2022) revealed that high liquidity levels are generally considered a positive financial indicator, indicating that the company can meet its financial obligations quickly and easily. Kaylsi & Khoiruddin (2021) stated that the size of a company could provide information or an overview of the company's prospects. This information serves as a signal to financial statement users indicating whether the company has good financial performance. E. Nugroho & Pangestuti (2010) convey that sales are at the forefront of a company and are the primary source of company revenue. Therefore, a company must have a good and effective sales system to enhance sales and profitability (Zhang et al., 2018). Nur & Mahiri (2022) explain if a company can achieve suitable sales targets, it will increase its revenue.

According to the signaling theory, high leverage in the company's capital structure can send negative signals about profitability. A high level of debt may indicate that the company faces an increased risk of default, which can reduce stakeholders' confidence in the company's ability to generate profits (Wiwattanakantang, 1999). Several studies have empirically demonstrated a significant negative impact of leverage on profitability, including Al-Jafari & Al Samman (2015), Işık (2017), Mijić et al., (2017), Apan & İslamoğlu (2018), Alarussi & Alhaderi (2018), Endri et al., (2021) and Al-Homaidi et al., (2021).

$H\alpha_1$: *Leverage has a significant negative impact on profitability.*

High liquidity indicates that the company has more current assets than current liabilities, allowing it to quickly repay short-term debts without incurring high debt burdens (Weinraub, J.H and Visscher, 1998). Consequently, the company can reduce the debt and interest payments burden, thereby improving profitability (Novita & Sofie, 2015). Studies demonstrating a significant positive impact of liquidity on profitability include Işık (2017), Mijić et al., (2017), and Lim & Rokhim (2020).

$H\alpha_2$: *Liquidity has a positive and significant impact on profitability.*

According to signaling theory, larger companies tend to have broader operational activities and better market access, thus having the potential to generate higher profits (Witasari & Cahyaningdyah, 2021). Research by Pratheepan (2014), Al-Jafari & Al Samman (2015), Fareed et al., (2016), Işık (2017), Alarussi & Alhaderi (2018), Khan et al., (2018), Lalisho & Sintayehu (2020), Al Nawaiseh (2020), Endri et al., (2021), and Al-Homaidi et al., (2021) demonstrate that company size has a significant positive impact on profitability.

$H\alpha_3$: *Company size has a positive and significant impact on profitability.*

Endri et al., (2021) explained that environmental and industry conditions determine sales growth, the trade-off between strategic growth and short-term profits, profit variations during the product life cycle, and the need for growth to build resources and scale that generate profitability. In

signaling theory, sales growth can be used as a signal indicating a good financial condition of the company (Anggarsari & Aji, 2018). Andinata (2021) stated that higher sales growth a company achieves corresponds to higher profitability. Research by Lalisho & Sintayehu (2020) and Endri et al., (2021) proved that sales growth significantly impacts profitability.

H04: Sales growth has a positive and significant effect on profitability.

III. METHODOLOGY

This study adopts a quantitative approach. The data used in this research are secondary data obtained from the Indonesia Stock Exchange and official company websites. The population of this study consists of State-Owned Enterprises (called BUMN) listed on the IDX between 2017 and 2021. The sampling technique used in this study is purposive sampling, which is a method of deliberately selecting the population and sample based on the research objectives or specific criteria that have been considered (Guarte & Barrios, 2006). The following are the criteria for selecting the sample companies in this study: State-Owned Enterprises that are listed on the Indonesia Stock Exchange, State-Owned Enterprises that have records for the period of 2017-2021, State-Owned Enterprises that have audited and published financial statements during the period of 2017- 2021, and companies that have complete data required for the variables under investigation, namely ROA, DER, CR, total assets, and sales growth during the research period. With the purposive sampling technique based on these criteria, a sample of 21 companies that meet or align with the sampling criteria in this research was obtained. The data analysis method includes descriptive and panel data regression analyses using Stata version 15. This study uses the following measurements:

TABLE 1. Measurement of Operational

Variables	Indicators	Source
Profitability (ROA)	$ROA = \frac{Net\ Profit}{Asset\ Total}$	Endri et al.,(2021)
Leverage (DER)	$DER = \frac{Total\ Liabilities}{Total\ Equity}$	Afolabi et al.(2019)
Liquidity (CR)	$CR = \frac{Total\ Current\ Assets}{Total\ Current\ Liabilities}$	Sajid et al.,(2016)
Company Size (TA)	Company Size = Total asset	Endri et al.,(2019)
Sales Growth	$SG = \frac{(Current\ sales - past\ sales)}{Previous\ sales \times 100}$	Mappadang,(2020)

Source: Article published, 2023.

IV. RESULT AND DISCUSSION

TABLE 2. Results of Descriptive Statistical Analysis

	ROA	DER	CR	LNTA	SG
Mean	.0368189	3.239745	1.147090	31.70055	.1941714
Max.	.5803	16.07860	3.332400	35.08400	4.003000
Min.	-.0942339	.0058	-15.05900	27.81600	-.584000
Std. Dev.	.0755355	3.077036	1.699598	1.739660	0.624550
Obs.	105	105	105	105	105

Source: Output Stata 15, data processed in 2023

In Table 2, the mean Debt Equity Ratio (DER) as a proxy for leverage is above 2 or 200%. This indicates that the condition of State-Owned Enterprises listed on the Indonesia Stock Exchange from 2017 to 2021 is highly vulnerable to various risks. The mean current ratio falls between one and three, indicating that the companies' liquidity is in good condition.

TABLE 3. Panel Data Regression Estimation Model Method

Variable	Probability	Result
Chow Test		
F(4,80)	2.84	Fixed Effect
Prob>F	0.0296	
Hausman Test		
chi2(4)	8.30	Random Effect
Prob>chi2	0.0813	
Lagrange Multiplier Test		
chibar2(01)	19.57	Random Effect
Prob> chibar2	0.0000	

Source: Output Stata 15, data processed in 2023

Based on the evaluation of the selection of the panel data estimation model using the Chow test, Hausman test, and LM test for the three-panel regression methods mentioned above, as presented in Table 3, it can be concluded that the Random Effects Model (REM) will be used to estimate and analyze the influence of leverage, liquidity, company size, and sales growth on State-Owned Enterprises listed on the IDX from 2017 to 2021. The random effects model employs the Generalized Least Square (GLS) approach (GLS) (Zulfikar, 2018). The GLS approach does not require testing classical assumptions as it is considered BLUE (Murtini, 2012). Gujarati & Porter (2009) explain that heteroskedasticity and autocorrelation tests are unnecessary for the random effects model as it is already considered BLUE. However, Gujarati & Porter (2009) do not mention the testing of normality and multicollinearity in the GLS approach.

TABLE 4. REM Estimation Results

Variable	Coefficient	Std. Error	z	P > z
DER	-.0098787	.0036547	-2.70	0.007***
CR	.0001945	.0039196	0.05	0.960
LNTA	.013363	.0073773	1.81	0.070*
SG	-.0018985	.0101822	-0.19	0.852
_cons	-.3546461	.2297744	-1.54	0.123

Note(s) : * p < 0.1, **p < 0.05, ***p < 0.01 Source: Output Stata 15, data processed in 2023

TABLE 5. Results of F Test and R2 Test

Variable	Probability
Number of obs	105
Prob > F	0.0384
R-squared	0.0954
Adj R-squared	0.0592

Source: Output Stata 15, data processed in 2023

Kotlik & Higgins (2001) explain higher significance level allows to gain initial insights and indicates the future direction of more in-depth research. Thus, using a 0.10 significance level provides an opportunity to identify potential relationships or

differences that could serve as the foundation for more detailed and comprehensive research in the future. Based on the explanation, this study uses a significance level of 0.10 or lower. The leverage variable has a significant negative effect on profitability. This is evidenced by the coefficient value of -0.0098787 with a probability of 0.007, which is smaller than 0.05. This study's results align with the hypothesis proposed as $H\alpha_1$ which states that leverage has a significant negative effect on profitability. These findings are also consistent with the signaling theory, where higher profitability or earnings levels of a company lead to lower leverage or debt usage. High leverage increases a company's business risk (Setya Pratiwi & Yulianto, 2022). These results are in line with the studies conducted by Al-Jafari & Al Samman (2015), Işık (2017), Mijić et al., (2017), Khan et al., (2018), Bintara (2020), Hendri et al., (2021) and Al-Homaidi et al., (2021). However, these findings contradict the studies conducted by Suhendry et al., (2021), Haryanto (2016) and Gunawan et al., (2022) which showed that leverage significantly positively affects profitability. Studies by Alahyari (2014), Pratheepan (2014), Fareed et al., (2016), Lalisho & Sintayehu (2020), and Al Nawaiseh (2020) state that leverage has no significant effect on profitability.

The liquidity variable has a positive but not significant effect on profitability. This is indicated by the coefficient value of 0.0001945 with a probability of 0.960, which is larger than 0.05 and 0.1. This result contradicts hypothesis $H\alpha_2$ which states that liquidity positively and significantly affects profitability. The liquidity variable is more related to managing short-term obligations, such as paying debts or daily operational expenses. Increasing liquidity can be used to fulfill short-term obligations without immediately impacting revenue or profits (Bintara, 2020). These results are consistent with the studies conducted by Wibowo & Wartini (2012), Endri et al., (2021), Pratheepan (2014), Bintara (2020), Hidayat et al., (2020) and Al-Homaidi et al., (2021) which showed that liquidity does not have a significant effect on profitability. The study by Alahyari (2014) found a significant negative impact of liquidity on profitability, while the studies by Işık (2017), Mijić et al., (2017), and Lim & Rokhim (2020) stated otherwise.

The size of the company variable has a positive but significant effect on profitability. This is indicated by the coefficient value of 0.013363 with a probability of 0.070, which is lower than 0.1. This result accepts $H\alpha_3$ stating that company size has a positive and significant effect on profitability. This finding is in line with the concept of signaling theory. Larger companies tend to have broader operational activities and better market access, which potentially leads to higher profitability (Ajanthan, 2013). Some studies supporting these results include Mijić et al., (2017), Saraswati & Hendra (2020), Horera & Maganya (2020), Lindawati et al., (2021) and Nur & Mahiri (2022). The study by Alahyari (2014) found a negative and insignificant effect of company size. Studies by Pratheepan (2014), Al-Jafari & Al Samman (2015), Fareed et al., (2016), Alarussi & Alhaderi (2018), and Al-Homaidi et al., (2021) stated that company size has a positive and significant effect, while the study by Lim & Rokhim, (2020) found the opposite result.

The sales growth variable has a negative and insignificant effect on profitability. This is indicated by the coefficient value of -0.0018985 with a probability of 0.852, which is greater than 0.05. These results prove that $H\alpha_4$, which posits that sales growth has a positive and significant impact on profitability, is rejected. This finding aligns with the empirical findings of Lim & Rokhim (2020). Contradictory results are shown in the studies by Charles et al., (2018), Lalisho & Sintayehu (2020), Mijić et al., (2017) and Endri et al., (2021) which stated that sales growth has a significant positive effect on profitability. On the other hand, the studies by Lindawati et al., (2021) and Nur & Mahiri (2022) demonstrated a significant negative effect of sales growth on profitability.

The evaluation of the coefficient of determination shows that the adjusted R-squared value is 0.0592, which means that only 5% of ROA is influenced by CR, DER, LNTA, and SG. Based on Table 4, the prob>F value is observed to be 0.0384, which is smaller than 0.05. Therefore, that leverage, liquidity, company size, and sales growth have a significant simultaneous effect on profitability.

V. CONCLUSIONS AND RECOMMENDATIONS

This study to find empirical evidence regarding the influence of leverage, liquidity, company size, and sales growth on the profitability of State-Owned Enterprises (BUMN) listed on the Indonesia Stock Exchange during the period of 2017-2021. The research results showed that the leverage variable significantly negatively affected profitability. The liquidity variable had a positive but not significant effect on profitability. The company size variable had a positive but not significant impact on profitability. The sales growth variable had a significant negative but insignificant effect on profitability. This study has several limitations. Firstly, it only used leverage, liquidity, company size, and sales growth to measure profitability. Secondly, the coefficient of determination in this study had a low value, only 5% for BUMN listed on the Indonesia Stock Exchange from 2017 to 2021. Therefore, future researchers should include external factors as independent variables or modify the proxies for each variable used. Further research is also recommended to re-examine the influence of liquidity, company size, and sales growth on profitability in other sectors of industries under observation.

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