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The Debt Policy and Performance of State-Owned Companies in Indonesia

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Abstract

Research Aims: This research aims to explore the factors influencing debt policy in "red-license plate" companies in Indonesia from 2010 to 2020.

Design/Methodology/Approach: The research method used is empirical studies to achieve the study's objectives.

Research Findings: The first analysis result showed that their debt policy was significantly determined by collateral value of assets, profitability, company size, business risk, liquidity. However, those factors partly clarified the policies, whereas other factors outside the observation defined the rest. The result of the second analysis meanwhile showed that the debt policy has significant negative impact on the company performance both long-term and short-term period.

Theoretical Contribution/Originality: Several research strategies that may be useful in this respect are discussed, and a typology of constructs is proposed on the basis of this analysis is Short term debt policy, Long term debt policy, and The thermal design power are as latent variables; the collateral value of assets, Profitability, Company size, Business risk, Growth opportunity, and Liquidity are construct variables.

Practitioners/Policy Implications: The first stage of analysis is intended to examine the factors influencing debt policy, both total debt policy, short term debt policy, and long-term debt.

Research Limitations/Implications: Considering the limited amount of data available, this study conducts a risk assessment based on historical data only. A more complete identification of risks and vulnerabilities will include a forward-looking assessment using sensitivity analysis, scenarios, and testing of debt policies on "state-owned" companies in Indonesia from 2010 to 2020 and the impact of debt policies on the financial performance of companies during that period. We will next explain the methods used to achieve the objectives of the study. Furthermore, it further describes the results of research and discussion and winds up with conclusions and suggestions.

Keywords: Company; Debt; Financial; Policy

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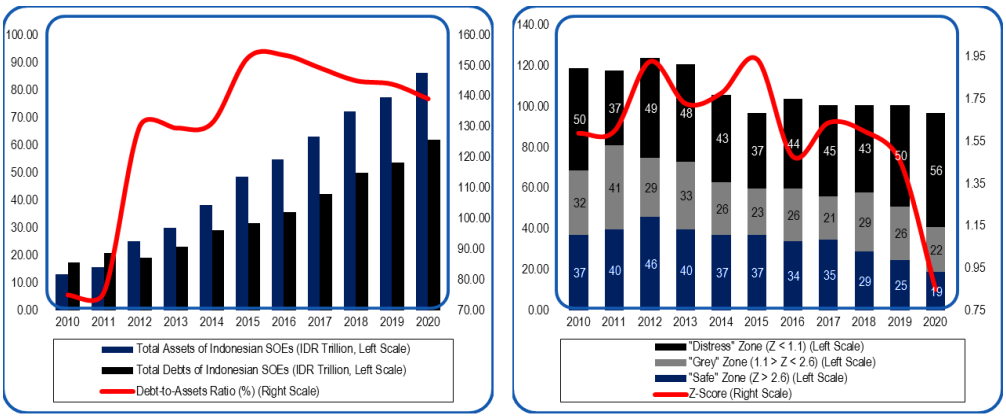
Introduction

Issues concerning state-owned companies (BUMN/Badan Usaha Milik Negara) have been massively discussed throughout Indonesia in the past decade. During a democracy event, i.e. in the Presidential Election of 2014-2019, multidimensional issues relating to state-owned companies grew to be a hot topic on each candidate's campaign. Moreover, they have been the subject of the candidate debate event organized by the General Election Commissions. It does not stop there; the tension of their problems is getting higher from time to time, particularly when some of them are

involved in a scandal, as well as being used as a means of remuneration of the elected president and vice president for the success team and the political campaign participants. People who are instrumental in winning their president and vice president are given strategic positions in these "red-license plate" companies (another term for Badan Usaha Milik Negara in Indonesia).

This study assesses the financial performance at the Issues concerning state-owned companies have massively been discussed throughout Indonesia in the past decade who effect the the factors influencing debt policy in "red-license plate" companies in Indonesia from 2010 to 2020 and the impacts of debt policy on the company's financial performance during that period. This study is different from others, that empirical studies on debt policy are almost entirely conducted on non-state-owned companies, while BUMN are very rare to find.

As previously stated, the problems of these "red-license plate" companies are very complex. The two most highlighted problems are debt policy and company performance. Statistics from the Ministry of Finance of the Republic of Indonesia show that as of 2020, the total debt of all companies has exceeded IDR 6,637.18 trillion (US$ 472.92 billion), while its total assets are IDR 9,241.72 trillion (US$ 658.50 billion). This means that their ratio of debt to total assets has exceeded 71.82%. The average debt per company is IDR 62.03 trillion (US$ 4.42 billion), with an average total asset of IDR 86.37 trillion (US$ 6.15 billion). Compared to 2010, their debt has increased by 252.81% or an average of around 22.98% per year. The development of their debt over the last 11 years is described in Figure 1.



a. Debt-to-Assets Ratio Average b. Z-Score Average

Figure 1 Debt-to-Assets Ratio Average & Z-Score Average (2010-2020)

In contrast to the debt problem, the performance of "red-license plate" companies is very bad from year to year. In Figure 1b, it can be seen that the average z-score is below 1.60 or is in the ‘gray’ zone, meaning that unless their condition gets very serious attention very soon, it will lead them to bankruptcy. From 2010 to 2020, their average z-score tends to decrease from year to year. Specifically, the number of companies in the ‘safe’ zone is decreasing, while those in the "distress" zone are increasing from year to year. The companies in the "gray" zone also tend to decrease. However, the decrease is not because some of them have managed to enter the ‘safe’ zone but have fallen into the "distress" zone.

The trend of the debt of 'red-license plate' companies which is increasing from year to year, while their performance is decreasing, indicates that their debt policy has so far been inversely proportional to performance. This indication clearly contradicts the MM theory (Modigliani & Miller, 1963), with No Tax, which states that the performance (value) of a company does not depend on debt policy. In addition, these indications are also irrelevant to MM theory (Modigliani & Miller, 1963), with taxes and the agency theory (Jensen & Meckling, 1976) These theories argue that debt policy affected company performance because interest payments can reduce taxes, minimize the costs of financial distress, minimize agency costs, minimize information asymmetry, and minimize opportunistic managers. However, these indications may be in accordance with the explanation of the theory of trade-off and pecking orders (Stewart & Nicholas, 1984), In the perspective of trade-off theory, the use of debt will provide benefits at a certain point (optimum point) i.e., the point of balance between costs and benefits. However, if the use of debt increases, the company will face bankruptcy problems. Meanwhile, from the perspective of pecking-order theory, debt policy is inversely related to company performance.

This paper has two main objectives. First, it explores the factors influencing debt policy in "red-license plate" companies in Indonesia from 2010 to 2020. Second, it examines the impact of debt policy on the company's financial performance during that period. This study is different from others, because empirical studies on debt policy are almost entirely conducted on non-state-owned companies, while BUMN (Badan Usaha Milik Negara) is very rare. This is because the majority of them are private (non-public) companies, so their data is difficult to access. Consequently, their knowledge of financing behavior is relatively small. Besides, this study highlights BUMN in Indonesia, which is different from BUMN/Badan Usaha Milik Negara in other countries.

BUMN (Badan Usaha Milik Negara) in Indonesia is very inherent in political interests, which are entirely under the control of the Minister of State-Owned Enterprises of the Republic of Indonesia, while BUMN (Badan Usaha Milik Negara) in other countries may be less inherent in political interests because it is under the control of a professional holding, for instance the National Treasury Berhad (Malaysia) and Tamasek (Singapore). Therefore, this study is expected to provide a significant contribution to the financial literature, especially regarding the debt policy of BUMN. Furthermore, it is also expected to be able to provide implicative suggestions to support the sustainable improvement of BUMN (Badan Usaha Milik Negara) performance.

Here are several previous studies. First, "Determinan Kebijakan Utang (Studi Kasus Pada Badan Usaha Milik Negara di Indonesia Periode 2019-2021)" (Ainul et al., 2023) This study examines the asset structure, free cash flow, investment opportunity set, company size, effect on debt policy in a case study of State-Owned Enterprises listed on the Indonesia Stock Exchange. The results of this study showed a significant negative effect on debt policy between asset structure, FCF and firm size. However, the relationship between the investment opportunity set and debt policy cannot be proven in this study (Ainul et al., 2023). Second, "Corporate Social Responsibility's (CSR) Impact on Financial Performance: Moderating Effects of Earnings Management and Leverage" (Rita et al., 2022) This research attempts to test the impact of CSR on financial performance, with earnings management and leverage acting as moderating factors. The analysis results indicated that CSR had no significant effect on financial performance; earnings management could not

moderate the influence of CSR on financial performance; leverage could moderate the effect of CSR on financial performance.

The rest of this paper elaborates upon the related literature. We will next explain the methods used to achieve the objectives of the study. Furthermore, it further describes the results of research and discussion and winds up with conclusions and suggestions.

Literature Review and Hypotheses Development

Agency theory

Agency theory explains a situation that occurs in a company where there is a relationship between agents and principals who are bound by contracts. Agents in this case are management as executors, while principals are company owners who evaluate information. Both parties have a self-interest in every decision taken. The agent must also work optimally to provide satisfaction to the principal.(Fahmi, 2014) In agency theory there is a statement that there is a separation between the owner as a principal and the manager as an agent who runs the company, then agency problems will arise because each side will always try to optimize its utility function. (Astria, 2014) associated in the principal itself is aimed at avoiding risk. Then the agency theory itself is interrelated with cash dividends, so that the company's dividend policy itself is considered a tool to minimize agency costs for risk reduction with potential conflicts that exist (Keown, 2010). According to agency theory, diverging interests are the basis for conflicts between management and company owners, especially those related to funding.

Cash Dividends Policy

Cash dividend policy is the company's decision regarding the distribution of profits earned as cash dividends or retained in the form of retained earnings to pay for future investments as cash dividends or retained in the form of retained earnings to pay for future investments. (Yurinawari et al., 2017) The causal relationship between dividend policy and dividends, investment and debt (long term debt) is something that when viewed from the point of view of the tax hypothesis according to Brick and Ravid states that the use of long-term debt reduces the firm's expected tax liability and consequently increases the firm's market value in the present. Firms with greater information asymmetry will use more short-term debt (Barclay, Marx & Smith, 2003) Debt policy is one of the funding policies in the company. Making debt policy is not easy because in a company there are a lot of parties who have different interests, so that in making decisions it will not be separated from agency conflicts that occur in the company. The resulting conflict arising from differences in interests between managers and shareholders related to the company's debt policy will cause a cost that is used to monitor company management. According to Dewa (2019), profitable companies generally borrow small amounts. This condition is not because they have a low debtratio target, but because they require little external financing. Meanwhile, less profitable companies will tend to have greater debt because their internal funds are insufficient to carry out the company's operational activities and debt is a preferred source of external funding. According to bringham and houston states that a signal is an action taken by company management and provides guidance to investors and company actors, where this theory is based on the assumption

that management and shareholders do not have the same access to information on the company. Bringham & Houston, 2011) Information itself is an important element to present information, records or a good picture of the company and affects the profitability and growth potential of the company. (Bringham & Houston, 2011)

***H_1**: Cash Divident Policy has a significant favourable effect on long-term debt policy, and thermal design power.*

Profitability

Profitability is the company's ability to generate profits from its normal business activities during a certain period. The higher the profitability, the higher the company's ability to generate profit for the company. Generate profits for the company. Good company performance is shown through the success of management in generating maximum profit for the company.(Hery, 2016) The consequence of the findings is that an increase in the interest rate results in a decrease in the use of long-term debt, or a decrease in the interest rate results in an increase in the use of long-term debt. Considering that the interest rate is a cost for the company, this finding is logical because the greater the cost arising from the interest rate, the greater the cost borne by the company or the decrease in profit margin (Sugiarto, 2010) Profitability is also one of the factors that influence debt policy. Kasmir (2015) states that the profitability ratio is a ratio to assess the company's ability to seek profit or profit in a certain period. This ratio also provides a measure of the level of effectiveness of a company's management, which is indicated by the profit generated from sales or from investment income.

***H_2**: Profitability has a significant favourable effect on long-term debt policy, and thermal design power.*

The Collateral Value Of Assets

Asset collateral is the ratio of fixed assets to total assets which is considered a proxy for collateral assets or guarantees for costs incurred due to conflicts between shareholders and bondholders or collateral for costs incurred due to conflicts between shareholders and bondholder (Yurinawati et al., 2017) with high asset collateral owned by the company can reduce conflicts of interest between shareholders and creditors so that the company can pay dividends in large amounts, and it will have an impact on long-term debt payments and thermal design strength (Darmayanti & Mustanda, 2016).

***H_3 :** The Asset collateral value has a significant favourable effect on long-term debt policy, and thermal design power.*

Company Size and Growth Opportunity

Hartonio (2012) Stating that firm size is the size of the company can be measured by total assets or the size of the company's assets using the calculation of that logarithm value of total assets (Hendry et al., 2012) Company size based on total assets is generally due to the manager's assumption that a company with large total assets shows that the company is relatively stable and able to generate large profits. Large companies have a wider stakeholder base, so that company policies will have a greater impact on public interests than small companies. For investors, the company policy will have implications for future cash flow prospects. As for the regulator, it will have an impact on the amount of tax received and the effectiveness of the role of protecting society in general. Then company size is a proxy for price informativeness. Large companies will disclose more information than small companies, so that large companies tend to be in the public spotlight. In addition, investors like large companies because they have the ease of creating innovation by utilising their assets, so the company has the potential to have high profits in the future. (Suhartono, 2015) Growth opportunities indicate the prospect of company growth in the future. For companies that have high growth opportunities, it indicates that the company is able to maintain and improve the company's survival. (Nisrina & Herawaty, 2016).

***H_4**: Company Size has a significant favourable effect on long-term debt policy, and thermal design power.*

***H_5**: Growth Opportunity has a significant favourable effect on long-term debt policy, and thermal design power.*

Liquidity

Liquidity is the company's ability to fulfil its short-term obligations. Another definition is the ability of a person or company to fulfil obligations or debts that must be paid immediately with its current assets. Liquidity is measured by the ratio of current assets divided by current liabilities. Companies that have healthy liquidity at least has a current ratio of 100%. Liquidity measure liquidity measure that better describes the company's liquidity level is shown by the cash ratio (*cash to current liabilities*) with cash ratio (*cash to current liabilities).* Current ratio is a measure of liquidity which is the company's The company's ability to meet its short-term obligations through a number of cash, cash equivalents, such as demand deposits or other deposits in banks that can be withdrawn at any time owned by the company. The higher the current ratio indicates the ability of the company's cash to meet its short-term obligations. The higher the liquidity of the company, the more funds are available for the company to pay dividends, finance its operations and investments.

***H_6**: Liquidity has a significant favourable effect on long-term debt policy, and thermal design power.*

Research Methods

This study employs a combined method approach with data spanned over the last ten years (2010-2020). Both of the questions are answered by a quantitative method that analyzes the BUMN of financial performance data that explores the factors influencing debt policy in "red-license plate" companies in Indonesia from 2010 to 2020. Second, it examines the impact of debt policy on the company's financial performance during that period, including the average (D/E) ratio of total debt to total assets (TDP) per company. Data Analysis emplys descrivtive statistics on a financial perfomance indicators, and linear regression analysis tat is employed to determine the effect of debt structure on a statistics from the Ministry of Finance and the Ministry of BUMN (Pao et al., 2003). Document analysis is very useful for understanding the overt and hidden values in policies and the programs where they are implemented (Leavy, 2014).

The data covers all non-financial Badan Usaha Milik Negara in Indonesia from 2010 to 2020. Their number reaches 135 companies, consisting of 32 manufacturing companies (23.70%) and 135 non-manufacturing companies (76.30%). Of these, the majority (88.15%) are private (non-public) companies, and only 16 companies (11.85%) are public companies. Consequently, their financial data is not available in a comprehensive manner and tends to be difficult to find. Hence, we employ several students on a part-time basis to collect data manually (hand collecting), done by visiting their official website one by one to find their financial reports and annual reports. Moreover, we also access their data through statistics from the Ministry of Finance and the Ministry of BUMN (Badan Usaha Milik Negara). The data used is the annual data on the income statement and balance sheet.

The research variables consist of two types, namely independent and dependent variables. These variables are specifically presented in table 1.

Table 1 Research Variable, Symbol, and Their Measurement

Variable	Symbol	Measurement
Collateral value of assets	CVA	Fixed asset / total assets * 100
Profitability	PROF	Operating income / total sales * 100
Company size	SIZE	Log_total assets
Business risk	BR	STDev of operating income / total sales * 100
Growth opportunity	GO	Total sales growth
Liquidity	LIQ	Current asset / current liability * 100
Short term debt policy	STDP	Current liability / total assets * 100
Long term debt policy	LTDP	Long term liability / total assets * 100
Firm performance	FP	Z-Score Altman

The data analysis model was carried out through two stages. The first stage of analysis is intended to examine the factors influencing debt policy, both total debt policy, short-term debt policy, and long-term debt policy. This analysis was carried out by structural equation modeling (SEM). The specific models we developed for this analysis are (figure 2):

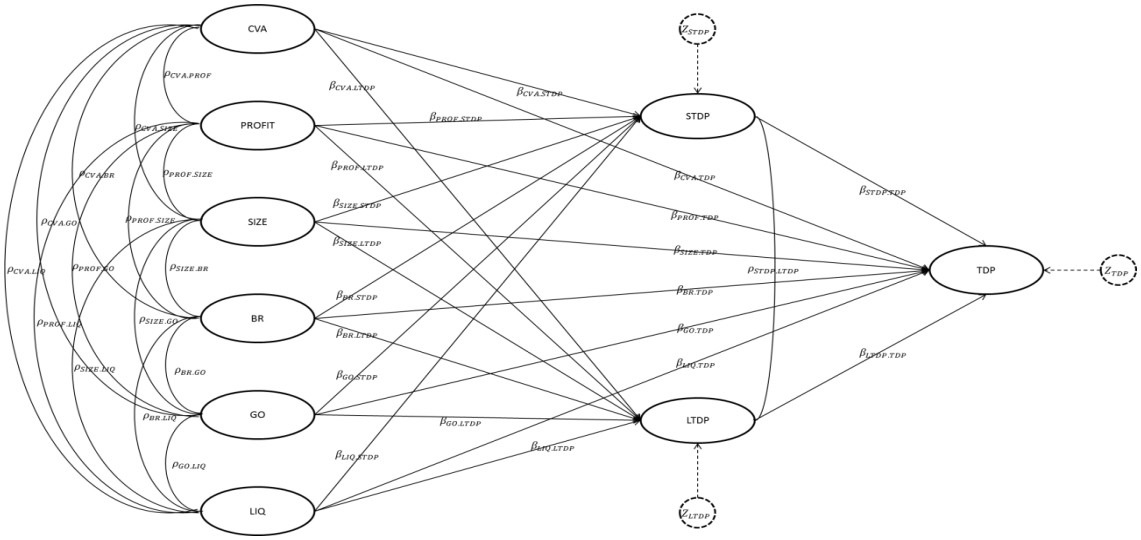


Figure 2 Structural Equation Modeling

Where: STDP, LTDP, and TDP are latent variables; CVA, POFIT, SIZE, BR, GO, and LIQ are construct variables; ρ is a correlation coefficient; β is slope; and Z is residual error (see Figure 2).

The second stage of analysis aims to examine the impact of debt policy on company performance (Amran, 2020). This analysis was performed with autoregressive distributed lag (ARDL). The specific models developed for this analysis are:

$FP_{i(0)} = \alpha + \beta_{TDP} TDP_{it(-1)} + s$ $Model\ 1$

$FP_{i(0)} = \alpha + \beta_{STDP} STDP_{it(-1)} + \beta_{LTDP} LTDP_{it(-1)} + s$ $Model\ 2$

Description:

1. Symbol i represents the observed companies;
2. Symbol t(0) represents data for the current year;
3. Symbol t(-1) represents data prior to the current year;

All dependent variables use data from the current year (t (0)), while all independent variables use data prior to the current year (t (-1)). This is based on the fact that a policy made this year is based on data from the previous year (past data).

Results and Discussion

Summary Statistics

The research data is not balanced in every year of observation. The number of companies observed throughout the observation year varied, which was caused by the addition and reduction in the number of members of Badan Usaha Milik Negara. For example, in 2010 their

number was 121 companies and in 2020 there were 93 companies. These additions and reductions were triggered by several factors, including the establishment of a new company and/or the purchase or control of ownership of another company, the sale or disposal of ownership of the old company, and/or because it has been dissolved or liquidated. Apart from being unbalanced, the research data also looks very extreme in every observed variable (see Table 2, panel A).

Table 2 Summary Statistics

	N	Min	Max	Mean	STDev.	Skewness	Kurtosis
Panel A. Data Original							
TDP (%)	1158	3.51	1,528.93	74.49	92.66	7.99	91.33
STDP (%)	1158	1.75	915.44	49.39	73.22	7.11	67.71
LTDP (%)	1158	0.00	658.66	25.11	37.64	8.06	106.31
SIZE (Log_Total Assets)	1158	-2.52	3.20	0.26	0.96	0.35	-0.10
Total Assets (IDR Till.)	1158	0.00	1,587.94	25.30	120.99	9.05	93.50
CVA (%)	1158	2.80	99.16	52.17	25.62	-0.07	-1.08
LIQ (%)	1158	0.01	35.09	1.93	2.33	6.15	62.14
GO (%)	1131	-452.53	23,927.36	44.06	679.77	33.02	1,152.67
BR (%)	1154	0.00	48,174.08	306.13	2,073.96	16.29	332.34
PROF (%)	1144	-29,085.08	89.02	-51.17	1,035.42	-23.92	614.19
Panel B. Free Data Outliers							
TDP (%)	1113	5.59	210.33	61.74	36.34	1.31	2.77
STDP (%)	1118	1.75	184.19	39.40	30.10	1.40	2.62
LTDP (%)	1093	0.51	116.78	22.80	20.78	1.55	2.54
SIZE (Log_Total Assets)	1158	-2.52	3.20	0.26	0.16	0.35	-0.09
Total Assets (IDR Till.)	1061	0.00	47.22	4.85	3.63	0.75	2.54
CVA (%)	1158	0.86	99.16	52.17	25.62	-0.07	-1.08
LIQ (%)	977	-7.46	7.49	0.77	0.02	-0.20	2.47
BR (%)	1061	0.00	47.22	4.85	6.63	0.75	2.54
GO (%)	930	0.00	36.83	6.76	5.69	0.88	2.11
PROF (%)	1065	-67.86	69.09	10.35	9.77	-0.68	2.06

The total debt of state-owned companies (non-financial) during the observation period tends to increase from year to year, with an average growth rate of 15.84% per year. The total debt of all companies until 2020 has reached IDR 2,458.49 trillion. This amount has increased to 308.10%

from 2010 (IDR 602.42 trillion). The average ratio of total debt to total assets (TDP) per company is 74.49% per year. However, the majority of them are below this average value (skewness = +7.99) with almost the same debt ratio with one another (kurtosis = 91.33). The company with the highest total debt ratio was PT Merpati Nusantara Airlines (1528.93%, in 2020) (Merpati Pailit, 2022), while the lowest was PT Indonesia Asaham Aluminum (3.51%, in 2013) (Indonesia Siap Ambil Alih Teknologi-Manajemen Inalum, 2013). Compared to short-term debt and long-term debt (LTDP), the ratio of short-term debt to total assets (STDP) has an average value that is higher than the ratio of long-term debt to total assets (LTDP) (i.e., 49.39% vs. 25.11%). However, the growth rate of LTDP is higher than that of STDP (18.27% vs. 12.69%). The company with the highest short-term debt ratio was PT Iglas (915.44%, in 2017) and the lowest was PT Indonesia Asahan Aluminum (1.75%, in 2013), while the company with the highest long-term debt ratio was PT Merpati Nusantara Airlines (658.66%, in 2013) and the lowest was Perum Bulog (0.002%, 2015). The majority of state-owned companies have short-term and long-term debt ratios that are lower than the average value, with a very high degree of data similarity.

State-owned companies have various sizes. They start from IDR 3.02 billion (PT Pradnya Paramita, 2011; Gemala et al., 2021) to IDR 1,587.94 trilion (PT Perusahaan Listrik, 2020). Their total assets tend to increase from year to year with an average growth rate of 16.81% per year (Company Profile, 2021). In 2020, their overall total assets held IDR 4,493.22 trillion or increased up to 318.92% from 2010 (IDR 1,072.57 trillion). Their average total assets are IDR 2,663.63 trilion per year.

The average total assets per company per year is IDR 25.30 trillion, but the majority of them have total assets less than this average value. Meanwhile, the collateral value of assets (CVA), or also known as the company's asset structure has an average value of 52.17%. This value shows that the composition of the company's assets is almost balanced between fixed assets and non-fixed assets. The average growth of fixed assets is higher than non-fixed assets (16.81% vs. 10.98%). The company with the highest CVA was PT Hotel Indonesia Natour (99.16%, 2016), while the lowest was PT PP Berdikari (2.80%, 2015). However, the majority of them had a CVA above the average value (skewness = -0.07), with values varying greatly from one to another (cutosis = -1.08).

The liquidity level (LIQ) of all state-owned companies tends to decrease from year to year, with an average growth rate of -1.59% per year. The average current ratio per company per year does look safe (current ratio = 1.93 times), but the majority of them have a ratio below the average value (skewness = +6.15) with almost the same liquidity level with one another (kurtosis = 62.14). The most liquid company is PT Indonesia Asaham Aluminum (35.09, in 2013), and the least liquid is PT Kertas Leces (0.006, in 2018).

The level of growth opportunity (GO) of all state-owned companies is really fluctuating, with a downward trend. Their entirety average growth opportunity rate is 6.09% per year. Individually, the average level of growth opportunities per company per year is 44.06%, but the majority of them are lower than the average value (skewness = +33.02), with a very high degree of similarity (kurtosis = 1,152.67). The company with the highest growth opportunity rate is PT Industri Sandang Nusantara (23,927.36%, 2017), while the lowest is PT Pradnya Paramita (-99.70%, 2011). The business risks of all state-owned companies tend to increase from year to year. The

overall average business risk of theirs is 323.95%, with a growth rate of 16.83% per year. Individually, the average business risk per company per year is 306.13%, but the majority are lower (skewness = +16.25), with almost the same level of business risk similarity with one another (kurtosis = 332.34). The company with the highest level of business risk is PT Iglas (48,174.08%), while the lowest is PT TWC BP and RB (0.003%).

The profitability of all state-owned companies is greatly fluctuating from year to year. The average ratio of operating profit to total sales of theirs is 15.18% per year. Individually, the average profitability per company per year is -144.97%, and the majority of them have profitability above this average value (skewness = -14.69) and with a high degree of similarity (kurtosis = 245.11). The company with the highest profitability is PT Pertamina (89.02%, 2020), while the lowest is PT Industri Sandang Nusantara (- 29,085.08%).

Table 2, Panel A, displays statistics from the original data, which looks very extreme or contains outlier data for each variable(Kazumi Wada, 2020). This can be seen from the standard deviation value, which is greater than the mean value, the skewness value which is far from zero (0), and the kurtosis value which is above 3. Therefore, these data is not suitable for use in the data analysis process with regression models. To overcome this, some outlier data is eliminated, resulting in data that is free from outliers. Statistics for data that are free of outliers are shown in Table 2, Panel B. As a result of this elimination process, the data set is reduced to 751 units or around 6.51% of the total original data set.

Table 3 Sign and Significance of Path Coefficient

Hyphotesis	*Path Coefficient*	T *Statistics*	P-*Value*	Results
H1 : Cash Divident Policy-> long-term debt policy and thermal design power	0.372	4.822	0.000	Supported
H2 : Profitability -> long-term debt policy,and thermal design power.	0.494	6.655	0.000	Supported
H3 : The Asset collateral value -> long-term debt policy, and thermal design power	0.436	5.839	0.000	Supported
H4 : Company Size -> long-term debt policy, and thermal design power	0.309	4.073	0.000	Supported
H5 : Growth Opportunity -> long-term debt policy, and thermal design power	0.171	2.306	0.022	Supported
H6 : Liquidity -> long-term debt policy, and thermal design power.	0.164	3.315	0.001	Supported

Based on the results (table 3) of the path coefficient, t statistic and P Value above, each hypothesis variable H1, H2, H3, H4, H5, H6 is supported.

Determination of Debt Policy

The results of data analysis using SEM (see Figure 3) show that significant debt policy (TDP) is determined by low CVA (β = -0.337), unprofitable (β = -0.301), small company size (β = -1.167), and illiquidity (β = -11.798), while business risks and growth opportunities are not significant. These factors (especially those that are significant) have a strong correlation (R = 0.650) with moderate explanatory variance (Adj. R2 = 0.419). Specifically, the determination of short-term debt policies (STDP) is different from long-term debt policies (LTDP). There are fewer significant factors determining short-term debt policies, but their correlation and explanatory variance are superior to those of long-term debt policies.

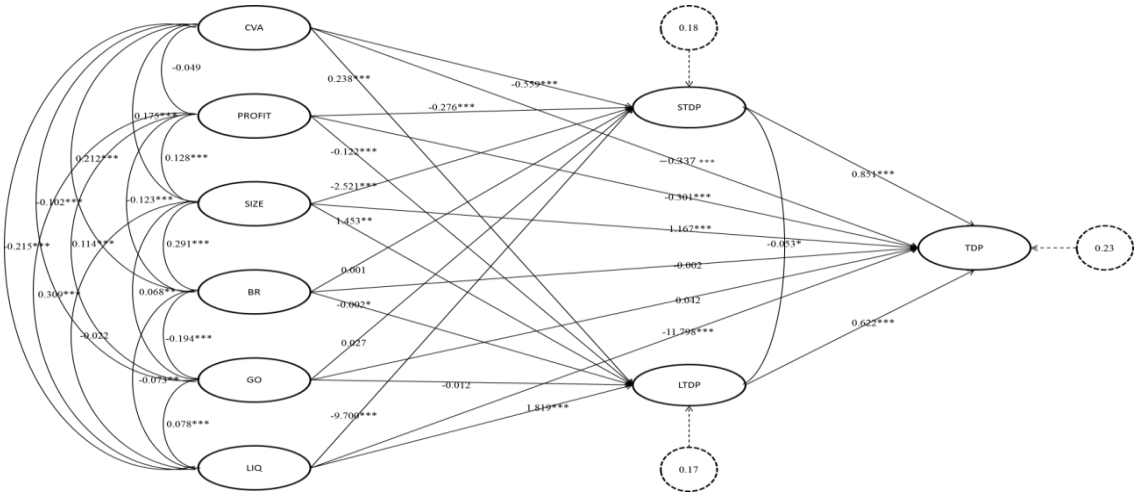


Figure 3 SEM Output

Regarding short-term debt policy, it is significantly determined by low CVA (Company Voluntary Agreement) (β = -0.559), unprofitable (β = -0.276), small company size (β = -2.521), and illiquidity (β = -9.700). The factors have a strong correlation (R = 0.742), with moderate explanatory variance (Adj. R2 = 0.547). Meanwhile, long-term debt policy is significantly determined by high CVA (β = 0.238), unprofitable (β = -0.122), large company size (β = 1.453), low business risk (β = -0.002), and high liquidity (β = 1.819) (see Table 3, Model 3). However, these factors have a weak correlation with long-term debt policies (R = 0.403), so that they are merely able to explain this policy of 15.6% (Adj. R2 = 0.156), while the majority of them are defined by other factors that are not included in this model.

The negative correlation between CVA (collateral value of assets) and short-term debt policy indicates that this policy is predominantly determined by low CVA. This is very logical, that a low CVA indicates the availability of abundant liquid assets, such as cash and its equivalents, receivables and inventories, all of which can be used as collateral for current liabilities. In general practice, current liabilities are always guaranteed by liquid assets, not tangible fixed assets. In addition, a low CVA can also send a signal to creditors that the company has a high level of liquidity (r_(CVA.LIQ)=-0.215), low business risk (r_(CVA.BR)=0.069), and good growth opportunities well in the future (r_(CVA.GO)=-0.067 and r_(CVA.SIZE)=0.175). In contrast, the positive correlation between CVA and long-term debt policy indicates that abundant CVA (collateral value of assets)

will be a collateral for creditors or debtholders as abundant CVA indicates a low level of corporate liquidity, high business risk, and low growth opportunities. On the other hand, the majority of state-owned companies in Indonesia (88.15%) are private (non-public) companies. So, the signaling effect due to information asymmetry becomes less relevant. Therefore, the hypothesis of the trade-off theory about the relationship between CVA and debt policy is not relevant for the short-term debt policy of state-owned companies in Indonesia. However, the hypothesis is relevant for long-term debt. In contrast, the hypothesis of the pecking order theory is relevant for short-term debt policies, but irrelevant for long-term debt policies.

The negative correlation between profitability and debt policy, both short term and long term, indicates that the debt policy of dominant state-owned companies is determined by losses or low profitability. In a general context, low profitability implies a higher default risk. However, in the context of state-owned companies, low profitability does not always indicate the risk. Low profitability or unprofitability in these companies can be determined by various factors, including certain assignments from the government, such as the assignment of electricity subsidies for PT. PLN (Indonesia's Electricity Company), fertilizer subsidies for PT Pupuk Indonesia, fuel and energy subsidies to PT Pertamina, subsidies credit interest for PT Bank BRI, and so on.

Such assignments will indeed be compensated by the government, but generally are not executed in the current year. As a result, these assignments often or even always have a negative impact on accounting profit, which in turn has a negative impact on the availability of internal funds. However, it has a positive impact on the company's liquidity (r_(PROF.LIQ)=0.309), especially the increase in the receivables value. Moreover, if a default risk exists, they have a high probability of getting a bailout so as reducing the worries of creditors or debtholders. Specifically, the low profitability of state-owned companies during this observation period is also not associated with low CVA, business risk, and growth opportunities. Therefore, the hypothesis of the trade-off theory about the relationship between profitability and debt policy, both short term and long term are irrelevant. However, it is relevant to the hypothesis of the pecking order theory.

Company size is negatively correlated with short-term debt policy but is positively correlated with long-term debt policy (Dwilaksono, 2010). This shows that small-sized state-owned companies have easier access to short-term debt, because they have a high level of liquidity, so they have more internal funding. In addition, their high level of liquidity also signals that they have high growth opportunities. However, it is difficult for them to access long-term debt because of the minimum CVA, low profitability, and high business risk. Consequently, the debt issuance cost will be more expensive. Conversely, large companies find it difficult to access short-term debt due to their low liquidity and growth opportunities. However, it is very easy for them to access long-term debt because CVA is abundant, profitable, and lowers business risk, which in turn will make their debt issuance costs cheaper. Therefore, the hypothesis of the trade-off theory is irrelevant to short-term debt policies, but relevant to long-term debt policies. Meanwhile, the hypothesis of the pecking order is relevant to short-term debt policies, but not to long-term debt policies.

“Asset structure has a significant negative effect on debt policy in state-owned companies in 2019-2021. This state-owned company uses its company assets for its operational funds and uses less debt, the company's asset funds are also not financed by debt.”(Ainun et al., 2023) Free cash flow on debt policy has a negative effect on Badan Usaha Milik Negara companies in 2019-2021. IOS has no significant effect on debt policy in state-owned companies in 2019-2021 (Ainun et al.,

2023). Company size has a negative effect on the debt policy of BUMN issuers. In general, the debt policy of state-owned companies is not significantly determined by business risk. In a general context, both trade-off and pecking order theories predict a positive relationship between the two, where high business risk will increase the possibility of financial distress. However, in the context of state-owned companies in Indonesia, this prediction is less relevant. State-owned companies have high creditor or debtholders' trust, even when their performance is poor. This is because they are owned by the state and at any time will be bailed out by the government. Therefore, business risk becomes insignificant in determining their debt policy. Specifically, only significant long-term debt policy is determined by business risk, and even at the lowest level of significance (10%). Thus, the hypotheses of the trade-off and pecking order theories about the relationship between business risk and debt policy are only partially relevant.

“Only five years, from 2015 to 2019, were covered by this study's research. The independent variable used is limited. “ (Rita et al., 2022) ROE was the only indicator used to measure financial performance. Information about the company's CSR disclosure was only available from the annual report, and not all the disclosure's components were included. Growth opportunities are not significant for the debt policy of state-owned companies in Indonesia, both short term and long-term debt policies. Statistically, their level of growth opportunities fluctuates a lot and tends to decrease from year to year. However, we failed to explain these findings. Significant debt policy is determined by the company's liquidity level. Liquidity is negatively correlated with short-term debt policy but did conversely with long-term debt policy. The negative correlation between liquidity and short-term debt policies indicates that these policies are predominantly carried out by less liquid companies to fulfill their liquidity needs. This needs to be done because they lack internal funds.

On the contrary, a positive correlation between liquidity and long-term debt policy indicates that this policy is predominantly carried out by liquid companies. Liquid companies tend to increase long-term (debt) funding, because they have the ability to meet maturing obligations and to avoid short-term (debt) funding to maintain excess liquidity. Thus, the hypothesis of the trade-off theory is not relevant to the short-term debt policy of state-owned companies in Indonesia but is relevant to the long-term debt policy. Meanwhile, the hypothesis of the pecking order is relevant to short-term debt policies, but not to long-term debt policies.

The Debt Policy Impact on Performances

In general, debt policy (TDP) negatively affected state-owned companies' performance during this observation period, both short and long term (see Table 4, General Column, Model 1). When they are compared, the negative impact of debt policy is greater on long-term performance (β = -0.376) than the impact on short-term performance (β = -0.315). The correlation of debt policy to company performance is very strong (R = 0.832), with an explanatory variance of up to 67.4% (Adj. R2 = 0.674).

Table 4 ARDL Output

	General		"Distress" Zone		"Gray" Zone		"Safe" Zone	
	Mode	Mode	Model	Mode	Mod	Mode	Model	Mode
Long run equation	-	--------	-	--------	-	--------	-	--------
TDP	0.376 ***		0.338***		0.016		0.206***	
STDP	-	0.334***	-	-0.409***	-	-0.282	-	-0.152
LTDP	-	-0.158***		-0.044		0.029	-	-0.260***
Short run equation	-	--------	-	--------	-	--------	-	--------
TDP	0.315***		0.367***		0.215		0.186	-
STDP		0.366***	--------	0.333***	--------	-1.681***	--------	-0.453*
LTDP	-	-0.101	--------	-0.275***	--------	-0.164	--------	-0.114
Y	2.222***	2.891***	1.095	1.397	1.675	11.502***	2.712	6.672 **
ect_{t-1}	0.471***	0.376***	192***	0.628***	0.805***	0.076	0.592***	0.913***
Cons.	3.538***	3.478***	1.240**	1.903***	1.751***	2.206***	4.535***	4.682***
Memo Items	0.832	0.839	0.895	0.913	0.670	0.860	0.905	0.911
R								
Adj. R^2	134.23***	109.37***	24.743***	26.192***	3.255**	9.610***	26.809***	27.236***
F-statistic								
No. of Obs.	914	885	313	306	236	228	316	303

The short-term debt policy (STDP) (table 4) explicitly has a significant negative impact on company performance, both short-term (β = -0.366) and long-term (β = -0.334) (see General Column, Model 2). The short-term debt policy carried out during this observation period was indeed able to meet liquidity in the current year, but this liquidity was not able to generate positive profits (losses). As a result, the business risks for the following years are increasing, which is accompanied by low liquidity and growth opportunities. Meanwhile, long-term debt policy (LTDP) only has a negative and significant impact on long-term performance. An increase in long-term debt will indeed encourage an increase in CVA and company size. However, it will increase losses due to financial burdens, so as it reduces company liquidity and increases business risk. The two debt policies will substantially reduce the company's performance (low z-score).

In previous studies, regarding the effect of profitability as measured using ROA and debt policy as measured using DER on firm value using PBV in BUMN companies listed on the Indonesia Stock Exchange. (Jenny & Asep, 2022) The study used 55 observation data, from 2016 to 2020. "That ROA has a positive effect on firm value, which indicates that the higher the profitability performance, the more it will increase the value of the company because investors will be more interested in investing in the company and will affect the resulting market value." (Jenny & Asep, 2022) While the DER variable shows the results have no effect on firm value. This could be because, even though the debt owned by BUMN companies is high, investors still believe and feel safe about the company's ability to pay its debts.(Jenny Ambarwati dan Asep Muslihat, 2022) There is a possibility of getting assistance from the government if it experiences a fairly low performance in fulfilling its debt obligations.

Specifically, the impact of debt policy on company performance varies in each z-score zone. In the 'distress' zone group, debt policy encourages more severe distress (β = -0.338) (see Column "Distress" Zone, Model 1). Short-term debt policy has a negative and significant impact on its short-term and long-term performance, while long-term debt policy only has a negative impact on long-term performance (see Column "Distress" Zone, Model 2). In the 'gray' zone group, debt policy generally does not have a significant impact on company performance. Only short-term debt policies have a negative and significant impact on short-term performance (see 'gray' Zone Column, Model 2). This shows that if the short-term debt policy is not effective and efficient, it can negatively affect the company's solvency, thus, in turn, can lead the company to a "distress" zone. Conversely, an increasingly effective and efficient short-term debt policy can boost performance, which in turn will lead the company to the 'safe' zone.

As for the "safe" zone group, company performance is very sensitive to debt policy, especially long-term debt policy towards long-term performance (see Column 'safe' Zone, Model 1, Model 2). Meanwhile, short-term debt policies only have a negative impact on short-term performance. The correlation between debt policy and company performance in this group is very high (R = 0.905), with an explanatory variance reaching 77.9%, indicating that debt policy is perilous for companies. Ineffective and efficient debt policies can lead companies to the 'gray' zone and can even fall into the "distress" zone.

Accordingly, these findings support the hypothesis of the trade-off theory, which states that debt policy is only beneficial when a balance exists between benefits and costs. However, if the increase in debt exceeds the balance point, then the company will face bankruptcy risk. Throughout this observation period, the debts of state-owned companies appear to exceed the balance point. Therefore, management and the government (as the owner) need to evaluate the existing debt policies. If existing debts are not effective and efficient, they should be repaid immediately or at least restructured to make them sustainable. Conversely, if debt is urgently needed, it must be resolved prudently.

Conclusion

Determination of debt policy on state-owned companies during this observation period in general (total debt policy/TDP) is significantly determined by the collateral value of assets, profitability, company size, business risk, and liquidity. Specifically, significant short-term debt policy is determined by low CVA, unprofitable, small company size, and illiquidity, with a strong correlation and strong explanatory variance. Meanwhile, significant short-term debt policy is determined by abundant, unprofitable CVA, large company size, low business risk, and high liquidity. Although there are more factors determining long-term debt policy, this policy is dominantly explained by other factors which are not discussed in this study. Short-term debt policies generally support the hypothesis of the pecking-order theory, while the dominant long-term debt policies support the hypothesis of the trade-off theory. However, this proves that no theory can exactly define debt policy or a definite capital structure.

The effect of profitability as measured using ROA and debt policy as measured using DER on firm value using PBV in state-owned companies listed on the Indonesia Stock Exchange. That ROA has a

positive effect on firm value, which indicates the higher the profitability performance. Meanwhile, the DER variable shows the results have no effect on firm value. Commonly, state-owned companies have had high debt during this observation period. Therefore, this policy has a significant negative impact on company performance, both short-term and long-term performance. Not only is this negative impact experienced by companies in the "distress" zone, but also by those in the 'gray' zone, even the 'safe' zone. The implication is that company management and the government (as the owners) need to evaluate the existing debt policies. In term of debts that are not effective and efficient, they should be repaid or at least restructured to make them sustainable. Moreover, regarding debts that perform well, the debt and risk management need to be improved. As for companies that need debt financing, it must be made prudently. This study is expected to provide a significant contribution to the financial literature, especially regarding the debt policy of BUMN (Badan Usaha Milik Negara). Furthermore, it is also expected to be able to provide implicative suggestions to support the sustainable improvement of Badan Usaha Milik Negara performance.

Considering the limited amount of data available, this study conducts a risk assessment based on historical data only. A more complete identification of risks and vulnerabilities will include a forward-looking assessment using sensitivity analysis, scenarios, and testing of debt policies on "state-owned" companies in Indonesia from 2010 to 2020 and the impact of debt policies on the financial performance of companies during that period. Furthermore, it further describes the results of research and discussion and winds up with conclusions and suggestions.

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