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Determining the Optimal Capital Structure of PT. Waskita Karya Tbk (Persero)

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Abstract: PT Waskita Karya Tbk, as one of the leading State-Owned Enterprises in Indonesia, plays an important role in national infrastructure development. However, major challenges arise due to the company's dependence on debt financing which causes an unbalanced capital structure. This study aims to determine the optimal capital structure of PT Waskita Karya and provide strategic solutions to support its business sustainability. Based on the analysis of financial projections for 2025, the optimal capital structure can be achieved at a debt ratio of 15%, with a Weighted Average Cost of Capital (WACC) of 7.50%. In this condition, the company's value can be maximized to IDR25,175 billion. This study recommends three main steps: debt restructuring through negotiation and debt-to-equity swap, sale of non-strategic assets to pay off high-interest debt, and operational efficiency with a focus on high-value projects. This study emphasizes the importance of strategic capital structure management for the sustainability of PT Waskita Karya. With targeted implementation, the company is expected to reduce financial risk, increase company value, and remain a reliable partner in national infrastructure development.

Keyword: Capital Structure, Waskita Karya, Firm Value

INTRODUCTION

Infrastructure development is one of the main pillars in driving a country's economic growth. In Indonesia, the infrastructure sector is the government's main focus to improve connectivity, logistics efficiency, and national competitiveness. PT Waskita Karya Tbk, as one of the State-Owned Enterprises (BUMN), has played a strategic role in supporting this effort through the construction of various large projects, such as toll roads, dams, and other public facilities. However, behind its significant contribution, the company faces serious challenges in financial management, especially related to its capital structure.

PT Waskita Karya's high dependence on debt-based financing has caused the company's capital structure to become unbalanced. In Q3 2024, the company's debt-to-equity ratio reached 900%, far above the limit considered healthy for the construction sector. This condition not only increases the cost of capital but also poses a liquidity risk and has the potential to reduce the company's value. In the theory of optimal capital structure developed

by Modigliani and Miller (1958), an efficient capital structure can minimize the Weighted Average Cost of Capital (WACC) and maximize the company's value. Therefore, it is important for companies to optimize their capital structure as a strategic step in facing these challenges.

This study aims to determine the optimal capital structure of PT Waskita Karya based on historical data and projections for 2025. This approach not only provides practical solutions for companies but also enriches the literature on capital structure management in infrastructure companies. Using the Weighted Average Cost of Capital (WACC) theory, this study analyzes the ideal debt and equity ratio to maximize company value. In addition, this study also explores financial restructuring strategies, such as the sale of non-strategic assets, debt-to-equity swap mechanisms, and income diversification, as concrete steps to achieve a healthier capital structure.

Through this study, it is hoped that PT Waskita Karya can overcome the financial pressures it faces, improve its capital structure, and continue to exist as a reliable partner in national infrastructure development. In addition, the results of this study are also expected to be a reference for investors and the wider community regarding the capital structure and sustainability of companies in the infrastructure sector.

METHOD

This study uses a quantitative method with a descriptive-analytical approach to evaluate the optimal capital structure of PT Waskita Karya Tbk. This type of research was chosen because it focuses on the analysis of historical financial data and future projections to provide solutions that are based on numbers and can be applied. The population in this study is all financial data of PT Waskita Karya for the last five years, from 2019 to Q3 2024, which includes the company's income statement, balance sheet, and cash flow statement.

This study covers 3 periods, namely historical data from 2019 to 2023, current data, namely Q3 2024, and projections for 2025. With secondary data obtained through official financial reports published by the company, as well as industry publications and related literature reviews.

The research instrument involves calculations to determine WACC and scenario projections to evaluate the impact of changes in capital structure on company value. The research procedure includes the stages of data collection, validation, calculation of optimal capital structure, to the formulation of strategic recommendations based on the results of the analysis. Data analysis techniques include the Weighted Average Cost of Capital (WACC) method and capital structure optimization using projection simulations until 2025.

The calculation of the cost of capital uses the WACC approach. The first step in calculation the WACC is to calculate both cost of equity and cost of debt. The cost of equity is calculated by adding the company’s risk-free rate and risk premium, which is implied by corporate risk and beta coefficient.

$$Re = \mathrm{R}f + (\beta\ x\ (Rm - Rf)$$

Where represents the cost of equity, Rf is the risk-free rate, β is the levered beta coefficient, Rm is the expected market return, and Rm – Rf denotes the equity risk premium. This formula captures the relationship between the risk-free rate, the systematic risk of the asset (as measured by beta), and the additional return required by investors for taking on equity risk. The calculation of the cost of debt can be done using several approached. One of them is using the risk-free rate and risk premium approach. For the risk-free rate, the same risk-free rate is used as the cost of equity calculation. While the company’s credit rating or called the spread, can be calculated using the method used by Damodaran (2023). Spread calculation can be approximate by using the value of the interest coverage ratio.

$$Rd = (Rf + Default\ Spread\ Rating)\ x\ (1 - Tax)$$

Where Re represents the cost of debt, Rf is the risk-free rate, the Default Spread Rating accounts for the additional risk premium based on the credit rating of the company, and Tax refers to the corporate tax rate. This formula reflects the after-tax cost of debt, considering both the inherent risk of the debt and the tax shield provided by interest payments.

After obtaining the cost of equity and cost of debt, these two values are multiplied by the weight of company's debt and equity to find the WACC. WACC can be used as an indicator whether the company is in good or bad financial condition (overlevered or underlevered) based on the framework described by Damodaran (2004). WACC is also can be used to calculate the value of the company (Gitman & Zutter, 2015). The formula to determining the WACC are shown below:

$$WACC = (Wd\ x\ Rd) + (We\ x\ Re)$$

Where Wd is the weight of total debt, Rd is the cost of debt, we are the weight of total equity, and Re is the cost of equity. The WACC represents the company's average cost of capital from all sources, weighted by their proportion in the company's capital structure. While The value of the company can be calculated using the formula:

$$V = [EBIT\ x\ (1 - T)] / WACC$$

Through this method, the study aims not only to find solutions to the problems faced by PT Waskita Karya, but also to provide practical insights that can be applied by the company and become insights for investors and the wider community.

RESULTS AND DISCUSSION

For the analysis, author divide this chapter into three analyses. First is to calculate the actual and optimum capital structure based on the historical 5 years data. Second, author will use the current condition from the Q3 2024 to calculate the actual and optimum capital structure. The last, author use historical data to project the optimum capital structure in best condition for the year 2025 in order to give external parties insight of the company's future.

Historical Cost of Capital and Optimum Capital Structure

The author uses assumption for calculating the optimum capital structure. The value of the market risk premium and risk-free rate are required from the market risk premia official website. Author uses the average number from each year of both market risk and risk-free rate to determine the exact number. The tax rate is obtained from Damodaran's marginal tax tare by country. While the value of the beta, the author got it from the Pefindo official website with the same approach to determine the market risk. Below are the assumptions used for the calculations:

Table 1. Key Assumption Historical 5-years

No.	Item	2019	2020	2021	2022	2023	Description
1	Risk Free Rate	7,50%	6,98%	6,40%	7,01%	6,61%	Market risk premia
2	Risk Premium	2,30%	3,01%	3,08%	2,82%	3,51%	Market risk premia
3	Tax	22%	22%	22%	22%	22%	Damodaran's marginal tax

							rate by country
4	Beta WSKT	2,038	2,063	2,021	1,997	2,154	Pefindo

To find the cost of capital, author uses weighted average cost of capital (WACC) approach. This approach is a method to find the capital structure of the company and at the end, the value of the firm can be seen also. To find the WACC, first it is necessary to calculate the cost of equity of the firm. Then, the firm cost of equity of 5 historical years are shown below:

Table 2. Cost of Equity Historical 5-years

Cost of Equity	2019	2020	2021	2022	2023
Risk Free Rate	7,50%	6,98%	6,40%	7,01%	6,61%
Risk Premium	2,30%	3,01%	3,08%	2,82%	3,51%
Levered Beta	2,038	2,063	2,021	1,997	2,154
Marginal Tax	22%	22%	22%	22%	22%
Cost of Equity (Re)	**12,18%**	**13,18%**	**12,62%**	**12,63%**	**14,18%**

The interest coverage ratio can be found by dividing EBIT to interest expense. After the ICR has found, the credit spread can be measure by the Damodaran credit spread. Furthermore, the calculation can be continued to the cost of debt. Here is the calculation of the cost of debt:

Table 3. Cost of Debt Historical 5-years

Cost of Debt	2019	2020	2021	2022	2023
Risk Free Rate	7,50%	6,98%	6,40%	7,01%	6,61%
Credit Spread	3,61%	20,00%	8,51%	17,00%	17,00%
Pre-Tax Cost of Debt	11,11%	26,98%	14,91%	24,01%	23,61%
Marginal Tax	22%	22%	22%	22%	22%
Cost of Debt (Rd)	**8,67%**	**21,05%**	**11,63%**	**18,73%**	**18,42%**

The after-tax cost of debt is higher than the risk-free rate that means the company can't borrow money at lower interest rate. So, for the company, it is better to investing in a risk-free asset than borrowing money. The cost of debt is also very fluctuated compared to the cost of equity that more stable through the years. With the above data, we can calculate the WACC that are shown below:

Table 4. WACC and Firm Value Historical 5-years

Year	2019	2020	2021	2022	2023
Weighted of Debt	0,76	0,84	0,85	0,85	0,88
Weighted of Equity	0,24	0,16	0,15	0,15	0,12
Cost of Debt	8,67%	21,05%	11,63%	18,73%	18,42%
Cost of Equity	12,18%	13,18%	12,62%	12,63%	14,18%
WACC	**9,50%**	**19,81%**	**11,78%**	**17,84%**	**17,90%**
EBIT	5945,8	-3141,7	4315,8	2281,1	1106,3
Tax	22%	22%	22%	22%	22%

Value of the Firm	**48.819,45**	**-12.369,77**	**28.584,87**	**9.971,21**	**4.820,02**

In the table above, we can see the condition of the WACC and the value of the firm of PT Waskita Karya in billion IDR for the past 5 years. For the year 2020, author decide to take out the WACC and value of the firm calculation because there is a force major (pandemic) that affect companies financial. It is clearly seen that after the pandemic of Covid-19, the company suffering from financial difficulties that reflected from the increase of the WACC number and the decrease from the value of the firm.

The essence of capital structure is to recalculate on the WACC calculation by modifying the ratio of debt to equity. Modification of debt can be varied at intervals of 1%, 5%, 10% or more. In this research, author uses a modified debt ratio at 5% intervals to obtain data sensitivity that start from 1% of debt. Below is the optimal capital structure calculation of PT Waskita Karya based on the 2019 data:

Table 5. Cost of Capital Simulation 2019

WACC and Firm Value Simulation of WSKT 2019					
Debt	**Equity**	**Rd**	**Re**	**WACC**	**Firm Value**
1%	99%	6,31%	8,85%	8,82%	52.582,38
5%	95%	6,31%	8,89%	8,76%	52.938,54
10%	90%	6,31%	8,95%	8,69%	53.390,57
15%	85%	6,57%	9,02%	8,65%	53.610,05
20%	80%	6,68%	9,10%	8,61%	53.845,97
25%	75%	6,79%	9,18%	8,59%	54.022,55
30%	70%	7,00%	9,28%	8,60%	53.954,37
35%	65%	7,00%	9,40%	8,56%	54.205,69
40%	60%	7,57%	9,53%	8,75%	53.021,85
45%	55%	8,30%	9,69%	9,06%	51.176,28
50%	50%	8,30%	9,88%	9,09%	51.033,93
55%	45%	8,67%	10,11%	9,31%	49.790,70
60%	40%	9,94%	10,40%	10,12%	45.823,30
65%	35%	9,94%	10,77%	10,23%	45.343,12
70%	30%	9,94%	11,27%	10,34%	44.872,91
75%	25%	12,49%	11,96%	12,36%	37.536,10
80%	20%	12,49%	13,00%	12,59%	36.836,34
85%	15%	12,49%	14,74%	12,83%	36.162,20
90%	10%	12,49%	18,21%	13,06%	35.512,28
95%	5%	12,49%	28,63%	13,29%	34.885,32
99%	1%	12,49%	111,97%	13,48%	34.399,46

It can be seen from the table above that the optimal capital structure of PT Waskita Karya Tbk, in 2019 was at the range of debt 35% to 40%. This can be seen at the lowest point of the WACC value for 8,56% and the maximum firm value at 54.205,69 (in billion IDR). The optimum capital structure graph against firm value is presented in the figure below:

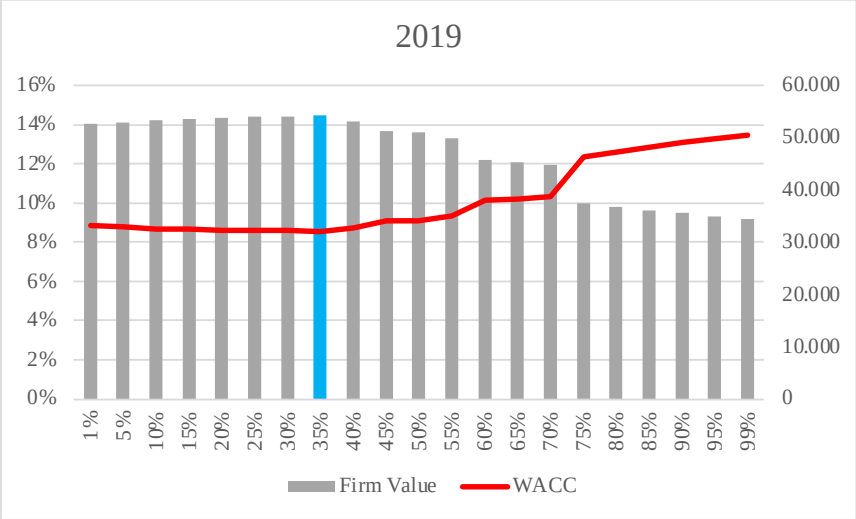

Figure 1. Optimum WACC and Firm Value 2019

If we look at the figure above, the actual value of company's capital structure in 2019 is 76%. Hence, it is necessary to decrease the debt portion to around 35% which is the optimum capital structure that can meet the highest value of the firm. With the big portion of debt in 2019 and financial difficulties that effected by the pandemic could make things worse for the Waskita Karya. According to the plan that company want to mortgage their toll road section to increase debt should be reviewed. With the calculation of capital structure for the past 5 years, it can be said that the company is already very overleveraged. The following table is a summary of WACC simulation and the firm value for past 5 years.

Table 6. Summary of Optimum and Actual Cost of Capital Historical 5-years

Year	2019	2020	2021	2022	2023
Optimum Capital Structure	**35%**	-	**25%**	**15%**	**5%**
WACC	8,56%	-	7,36%	7,92%	7,71%
Firm Value	54.205,69	-	45.725,60	22.460,36	11.189,30
Actual Capital Structure	**76,25%**	**84,30%**	**85,08%**	**85,50%**	**87,86%**
WACC	9,50%	19,81%	11,78%	17,84%	17,90%
Firm Value	48.819,45	-	28.584,87	9.971,21	4.820,02

As we mentioned before, from 2019 to 2023, the actual capital structure is already over levered if compared to the optimum capital structure. Waskita Karya has experienced financial difficulties, especially since the pandemic in 2020, where the company's EBIT was already minus (not including taxes and interest expenses). In an effort to improve its financial situation, the company instead added debt through bond issuance. This caused the company to experience financial difficulties due to very large debts. Moreover, the initiative that will be carried out by the company by mortgaging its toll roads is very irrelevant to the current financial condition

Current Cost of Capital and Optimum Capital Structure

After knowing the capital structure of Waskita Karya for past 5 years, we also should calculate the current capital structure based on the Q3 2024 financial report. The data that author obtain is from the Waskita Karya official website. Before we start the calculation, the data assumption that will be presented below are collected from the same method as the previous calculation.

Table 7. Key Assumption Q3 2024

No.	Item	Value	Description

1	Risk Free Rate	6,79%	Market risk premia
2	Risk Premium	3,86%	Market risk premia
3	Tax	22%	Damodaran's marginal tax rate by country
4	Beta WSKT	1,513	Pefindo

The same method is taken for the calculation of current WACC 2024. Below is the calculation for the cost of equity and cost of debt as well as the calculation to determine the credit spread.

Table 8. Cost of Equity and Cost of Debt Q3 2024

Cost of Equity	2024 Q3	ICR	2024 Q3	Cost of Debt	2024 Q3
Risk Free Rate	6,79%	EBIT	286,4	Risk Free Rate	6,79%
Risk Premium	3,86%	Interest Exp	3.458,9	Credit Spread	20%
Levered Beta	1,513	**ICR**	**0,083**	Pre-Tax Cost of Debt	26,79%
Marginal Tax	22%	Rating	D	Marginal Tax	22%
Cost of Equity (Re)	**12,64%**	**Spread**	**20%**	**Cost of Debt (Rd)**	**20,90%**

The cost of equity that can be seen from the table above is 12,64% which is quite similar with the cost of equity for the past 5 years. The levered beta also still above 1 but has slightly decrease from the past years. On the other hand, EBIT Q3 2024 is still very low, resulting in the low interest coverage ratio that only get D rating with 20% credit spread. This also causing the pre-tax cost of debt very high affecting the cost of debt at the level of 20,90%. This case not in line with the theory, because the cost of debt should be smaller than the cost of equity. This can happen in Waskita Karya because the EBIT is very small, make it impossible for the company to pay off all its debts including debt securities (bonds).

Table 9. WACC and Firm Value Q3 2024

Year	2024 Q3
Weighted of Debt	0,91
Weighted of Equity	0,09
Cost of Debt	20,90%
Cost of Equity	12,64%
WACC	**20,14%**
EBIT	286,4
Tax	22%
Value of the Firm	**1.109,06**

From the table above, it can be said that with a WACC reaching 20.14%, this is the highest WACC in the last 6 years, even exceeding the WACC in 2020. It can be said that the company already has a bad credit rating or is close to default, lenders will ask for very high interest rates to cover the risk. As in the study of Arhinful et al. (2024) published in the Future Business Journal, that non-financial companies listed on the Frankfurt Stock Exchange face expensive funding challenges, which affect their dividend policy decisions. These findings suggest that under certain conditions, high debt costs can affect the company's capital structure and policies.

After working on the current capital structure for the year 2024 (Q3), we move to the calculation to find the optimum capital structure of Waskita Karya. Below is the calculation for the optimum capital structure Q3 2024:

Table 10. Cost of Capital Simulation Q3 2024

WACC and Firm Value Simulation of WSKT Q3 2024					
Debt	**Equity**	**Rd**	**Re**	**WACC**	**Firm Value**
1%	99%	6,01%	7,46%	7,45%	2.999,59
5%	95%	11,93%	7,48%	7,71%	2.898,74
10%	90%	18,56%	7,51%	8,62%	2.591,98
15%	85%	18,56%	7,55%	9,20%	2.428,29
20%	80%	18,56%	7,59%	9,78%	2.284,04
25%	75%	18,56%	7,63%	10,36%	2.155,98
30%	70%	20,90%	7,68%	11,64%	1.918,43
35%	65%	20,90%	7,74%	12,34%	1.809,94
40%	60%	20,90%	7,80%	13,04%	1.713,07
45%	55%	20,90%	7,88%	13,74%	1.626,04
50%	50%	20,90%	7,98%	14,44%	1.547,42
55%	45%	20,90%	8,09%	15,13%	1.476,06
60%	40%	20,90%	8,24%	15,83%	1.410,98
65%	35%	20,90%	8,42%	16,53%	1.351,41
70%	30%	20,90%	8,67%	17,23%	1.296,66
75%	25%	20,90%	9,02%	17,93%	1.246,17
80%	20%	20,90%	9,54%	18,62%	1.199,47
85%	15%	20,90%	10,40%	19,32%	1.156,14
90%	10%	20,90%	12,14%	20,02%	1.115,83
95%	5%	20,90%	17,34%	20,72%	1.078,24
99%	1%	20,90%	58,93%	21,28%	1.049,94

It can be seen from the table above that the optimal capital structure of PT Waskita Karya in 2024 is at a range between 1-5% debt. This can be seen in the minimum level of WACC at 7,46% with value of the firm just below 3.000 billion Rupiah. This means that there is a huge gap between the current WACC with the optimum WACC. Corporate actions are needed to find the solution for this, while the cost of capital graph is presented below:

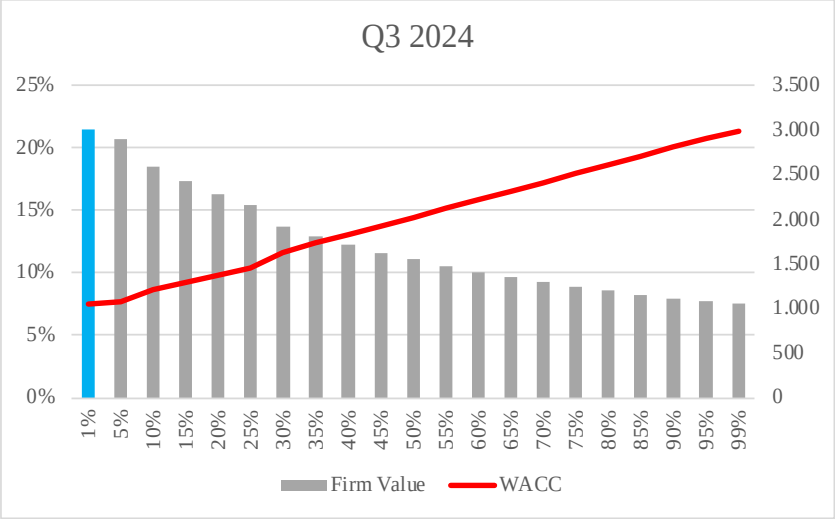

Figure 2. Optimum WACC and Firm Value Q3 2024

The following table is the summary of the current capital structure and the optimum capital structure for Q3 2024. It is clearly seen that Waskita Karya WACC is the highest since past 6 years. The value of the firm is also decreasing significantly from 2023. While the optimum capital structure should be in the range between 1-5% with the WACC at 7,45%. With that optimum WACC, the value of the firm can be maximized to just below 3.000 billion Rupiah. This means that the company should decrease their debt structure to meet the best capital structure.

Table 11. Summary of Optimum and Actual Cost of Capital Q3 2024

Year	Q3 2024
Optimum Capital Structure	**1%**
WACC	7,45%
Firm Value	2.999,59
Actual Capital Structure	**91%**
WACC	20,14%
Firm Value	1.109,06

Projecting Cost of Capital and Optimum Capital Structure

As mentioned before, this analysis will also contain the future projection of the cost of capital and the optimum capital structure for 2025. Author will just calculate the best condition for the year 2025, since the most likely condition in 2024 is already in a worse condition. Author uses the historical data as the benchmark to determine the key assumption for the projection 2025. Risk free rate, risk premium, and beta are collected based on the growth rate in the last 6 years. Debt and equity are also determined by the growth for last 6 years. While, for the EBIT, author will use the highest growth rate since the last 10 years, because for the past 5 years, the EBIT is very low after the financial effect since 2020. The collected data assumption will be presented below:

Table 12. Key Assumption for Projecting 2025

No.	Item	Value	Description
1	Risk Free Rate	6,50%	Author's analysis
2	Risk Premium	2,55%	Author's analysis
3	Tax	22%	Author's analysis
4	Beta WSKT	1,737	Author's analysis

No.	Item	Value	Description
5	Total Debt	75.057,46	In billion Rupiah
6	Total Equity	19.506,58	In billion Rupiah
7	Total Asset	94.564,04	In billion Rupiah

In this projection, author calculates cost of capital by carrying out the estimated value of the cost of equity and cost of debt. As mentioned before, this projection is only containing the best scenario for 2025, which the data used are the best condition that company ever experienced. The calculation for the projection 2025 is shown below:

Table 13. Cost of Equity and Cost of Debt 2025 F

Cost of Equity	2025 F	ICR	2025 F	Cost of Debt	2025 F
Risk Free Rate	6,50%	EBIT	2.420,3	Risk Free Rate	6,50%
Risk Premium	2,55%	Interest Exp	4.128,2	Credit Spread	17%
Levered Beta	1,737	**ICR**	**0,590**	Pre-Tax Cost of Debt	23,50%
Marginal Tax	22%	Rating	C	Marginal Tax	22%
Cost of Equity (Re)	**10,93%**	**Spread**	**17%**	**Cost of Debt (Rd)**	**18,33%**

The cost of equity in the projection 2025 is lower than the Q3 2024. With the projected EBIT, the ICR rating is still low with 17% since the interest expenses is based on the 5,5% interest rate from the total debt. However, the cost of debt is slightly lower than the Q3 2024 since there is an increase in the spread rating.

Table 14. WACC and Firm Value 2025 F

Year	2025 F
Weighted of Debt	0,79
Weighted of Equity	0,21
Cost of Debt	18,33%
Cost of Equity	10,93%
WACC	**16,80%**
EBIT	2.420,3
Tax	22%
Value of the Firm	**11.234,15**

Can be seen in the table above that the projection of cost of capital for the best condition is 16,80% with the value of 11.234 billion Rupiah. This number is getting better if compared to the current condition (Q3 2024). Moreover, to calculate the optimal WACC for the best condition projected in 2025, an interactive calculation of the cost of equity and cost of debt is carried out by modifying the value of the capital structure from 1% to 99%. The calculation is going as the same method as the previous discussion. Below is the calculation of the optimum capital structure projecting for 2025.

Table 15. Cost of Capital Simulation 2025 F

WACC and Firm Value Simulation of WSKT 2025 F					
Debt	**Equity**	**Rd**	**Re**	**WACC**	**Firm Value**
1%	99%	5,53%	7,62%	7,60%	24.852,37

WACC and Firm Value Simulation of WSKT 2025 F					
Debt	**Equity**	**Rd**	**Re**	**WACC**	**Firm Value**
5%	95%	5,53%	7,65%	7,55%	25.012,22
10%	90%	5,91%	7,70%	7,52%	25.089,48
15%	85%	6,02%	7,76%	7,50%	25.175,07
20%	80%	6,43%	7,82%	7,55%	25.020,99
25%	75%	7,52%	7,90%	7,80%	24.196,28
30%	70%	7,89%	7,98%	7,95%	23.743,62
35%	65%	9,16%	8,07%	8,45%	22.333,31
40%	60%	11,71%	8,18%	9,59%	19.677,46
45%	55%	11,71%	8,31%	9,84%	19.181,23
50%	50%	11,71%	8,47%	10,09%	18.709,42
55%	45%	11,71%	8,66%	10,34%	18.260,27
60%	40%	14,26%	8,90%	12,12%	15.580,02
65%	35%	14,26%	9,21%	12,49%	15.111,44
70%	30%	14,26%	9,62%	12,87%	14.670,23
75%	25%	18,33%	10,20%	16,30%	11.583,32
80%	20%	18,33%	11,06%	16,88%	11.185,73
85%	15%	18,33%	12,50%	17,46%	10.814,52
90%	10%	18,33%	15,38%	18,04%	10.467,16
95%	5%	18,33%	24,01%	18,62%	10.141,43
99%	1%	18,33%	93,05%	19,08%	9.895,08

The table above describes the optimal capital structure of the company when it is at its best condition in 2025. The cost of debt and cost of equity after the analysis of the optimal capital structure projected for 2025 has changed, namely to 6,02% and 7,76% respectively. The table also shows that the proportion of company debt to obtain an optimal capital structure is 15% or equal to the value of IDR 14.184,61. With this debt proportion, the company will optimize its capital structure with a WACC of 7,50% or the same value with IDR 25.175 billion. Next, the cost of capital graph is shown below:

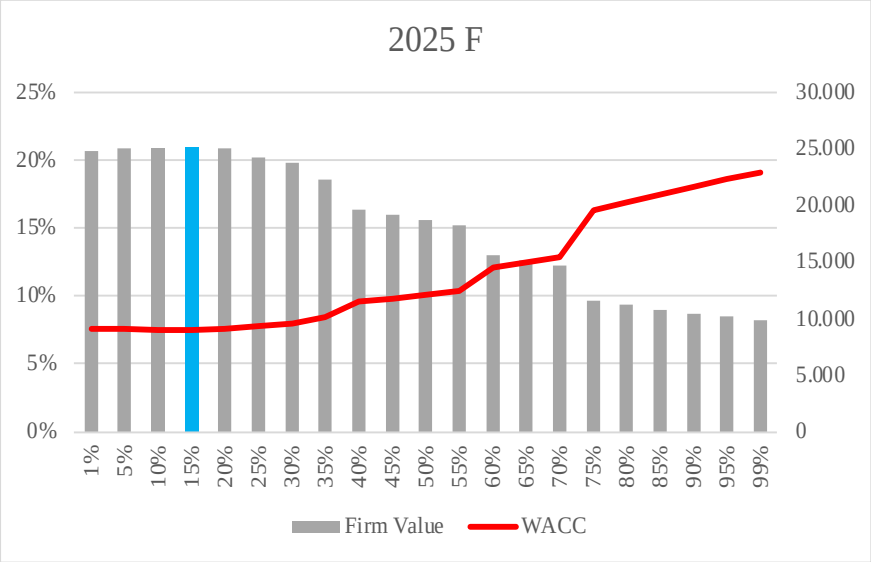

Figure 3. Optimum WACC and Firm Value 2025 F

CONCLUSION

This study focuses on the optimization of the capital structure of PT Waskita Karya Tbk, a State-Owned Enterprise that has a strategic role in national infrastructure development. Based on the analysis of historical data, current conditions, and projections in 2025, it can be concluded that the company is currently in an overleveraged condition, with a very high debt-to-equity ratio reaching 900% in Q3 2024. This condition causes the company's Weighted Average Cost of Capital (WACC) to increase significantly to 20.14%, which not only burdens the company financially but also reduces the company's value in the eyes of investors.

Through this study, the company's optimal capital structure has been determined, namely with a debt-to-total capital ratio of 15%, which can reduce the WACC to 7.50%. In this condition, the company's value is projected to be maximized to IDR 25.175 billion. To achieve an optimum capital structure, this study recommends three main steps: first, renegotiate with creditors to lower interest rates, extend the tenor, and utilize the debt-to-equity swap mechanism; second, selling non-strategic assets that do not contribute significantly to the company's returns, with the proceeds of the sale being used to pay off high-interest debt; and third, improving operational efficiency by evaluating ongoing projects and focusing on projects with a higher Return on Capital (ROC) than WACC.

This research contributes to financial management, especially in the context of capital structure management in infrastructure companies. The results of this study not only provide practical solutions for PT Waskita Karya to improve its financial condition but also serve as an important reference for both investors and researchers in the future, especially in understanding the dynamics between optimal capital structure, WACC, and company value. With consistent implementation of the recommended strategies, PT Waskita Karya is expected to be able to achieve business sustainability while supporting national infrastructure development.

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