

Quick Financial Health Assessment for Specific Company Base on Dam Business (Case Study: Perum Jasa Tirta II)

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Abstract - Perum Jasa Tirta II (PJT II) is a State-Owned General Company engaged in dam and water resource development. As a state-owned enterprise, it must balance two competing interests: the government's benefit-oriented mandate and the responsibility to generate profits. PJT II must be sustainable to achieve shareholder objectives while avoiding financial distress. The financial assessment is conducted using Economic Value-Added analysis to ascertain the company's actual performance and financial distress analysis based on the Altman Z-Score Model to determine an early warning if the company is experiencing financial distress. The research question is how the financial performance of Perum Jasa Tirta II using Altman Z-Score Analysis and Economic Value-Added Analysis. The research method used in this study is quantitative methods with primary and secondary data from Financial Report PJT II year 2015-2019. According to Z-score analysis, PJT II was in the safe zone between 2015 and 2019, with an average score of 9.74 and a Compound Annual Growth Rate (CAGR) of 10%. The value of EVA was positive between 2015 and 2016, with an increase of 2.127% and a Compound Annual Growth Rate (CAGR) of 50%. Also, according to the Monte Carlo Simulation, the probability of EVA 0 is 34.47%. PJT II needs to maintain EBIT and equity, as these are the two major factors affecting EVA's value by adding revenue streams to increase profitability.

Keywords - Economic Value Added (EVA), Altman Z-Score, financial distress, financial performance, State-Owned Company, General Company

I. INTRODUCTION

Water is critical for life. Only a small percentage of countries optimize existing water resources to the extent that they exceed 70% of available sources. The remainder is in numerous parts of the world, including Indonesia, where only 10% of water resources are managed.[1]. The independence ideals enshrined in the fourth paragraph of the 1945 Constitution's Preamble, access to safe, sustainable water, are necessary to achieve these goals. The advancement of natural resource management and exploitation aims to generate added value through growth, profitability, resource utilization (profit), and increased economic benefits from increased food and energy security achieved through operational excellence in natural resource management. According to Government Regulation No. 7 of 2010 concerning Public Company (Perum) Jasa Tirta II, Perum Jasa Tirta II is mandated as the operator of water resources management in the Citarum River region and Jatiluhur Dam as a state-owned company. In addition to operating a water management and supply business, Jasa Tirta II is mandated to provide public services in the field of water resources, including flood

control, irrigation water provision, and conservation. Apart from carrying out the government's mandate, Perum Jasa Tirta II, as a State-Owned General Company, can fulfil company obligations by ensuring the business's sustainability. However, Jasa Tirta II faces a dilemma in providing public services because more public services (benefits) than other derivative tasks generate profits from water resource management. Therefore, its existence must be protected to avoid financial distress and even bankruptcy while continuing to pay dividends to the government as a shareholder. As a precursor, it is necessary to consider the possibility of bankruptcy as an initial signal, which is analyzed using the Altman Z-Score model for financial distress.

Ratio-based performance evaluations are also highly dependent on the accounting method or treatment employed[2]. Because this ratio cannot be relied upon to determine the added value created during a specified period, an analysis is also required to demonstrate the company's management's actual performance. Economic Value-Added Analysis (EVA) is used to address these issues.

Based on the explanation above, Perum Jasa Tirta II needs to analysis financial performance to determine the financial condition using Altman Z-Score Analysis and Economic Value-Added Analysis.

II. METHODOLOGY

The purpose of this research is to determine Perum Jasa Tirta II's Z-Score and Economic Value-Added using data from the company's financial reports from 2015 to 2019 and several references related to research at Perum Jasa Tirta II. The research method used in this study uses quantitative methods. The quantitative method is defined as explaining an issue or phenomenon through the collection of numerical data. The data collection using primary data and secondary data with the primary data is obtained from the author's observations and interviews with someone in the company who understands the phenomena in the last few years. Secondary data were obtained from the Financial Report of Perum Jasa Tirta II 2015-2019.

A conceptual framework is a brief overview for managing the ideas in this project. The author uses this to link between business issues and methodology to answer research questions and research objectives. The framework can be illustrated below.

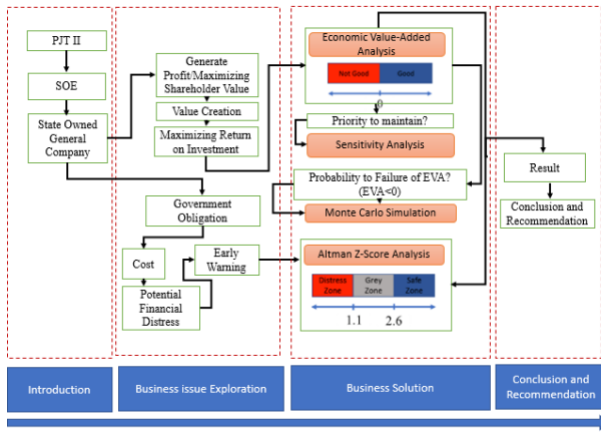


Fig. 1 Conceptual Framework

A. Financial Performance

The three primary financial statements are the Income Statement, the Balance Sheet, and the Statement of Cash Flows. All three statements are required to comprehend and evaluate financial performance fully. However, financial statements by themselves provide a limited view of a company's performance and must be complemented by key financial ratios and, ultimately, an understanding of its market[3]. Financial performance analysis is frequently used to ascertain a company's financial health based on financial accounting. Typically, financial performance measures a company's health by comparing its financial data in a ratio.

B. Financial Distress

Financial distress can occur in a variety of businesses and can be a trigger to bankruptcy. If the business is already in financial distress, management must exercise caution, as it may enter the bankruptcy stage. The management of a business experiencing financial distress must take several steps to resolve the company's financial difficulties and avoid bankruptcy.[4].

C. Altman Z-Score Model

Altman's Z-Score model is a predictive calculation that forecasts a company's bankruptcy period within the next two years. Edward Altman, a professor of finance in the United States, developed the model as a measure of a company's financial stability.[5].

Altman developed the model in 1995 with the goal of predicting financial distress in non-manufacturing firms such as service sectors, manufacturers, small businesses, and wholesalers.

$$Z'' = 6.56X_1 + 3.26X_2 + 6.727X_3 + 1.05X_4 \quad (1)$$

X_1 : Working Capital / Total Assets
 X_2 : Retained Earnings / Total Assets
 X_3 : EBIT / Total Assets
 X_4 : Book Value of Equity / Total Liabilities

Zone:

$Z'' > 2.6$ is "safe" zone, this Zone indicates that a company is less likely to go bankrupt

$1.1 < Z'' < 2.6$ is "grey" zone indicates that the company is in danger of going bankrupt.

$Z'' < 1.1$ is "distress" zone indicates that the company would almost certainly go bankrupt in the immediate future.

D. Economic Value-Added (EVA)

Stern Stewart, a New York-based consulting firm, was the primary marketer of EVA in the 1990s. The firm's founders, Joel Stern and Bennett Stewart became prominent proponents of the measure. Their success spawned a slew of imitators from certain consulting firms, most of whom employed variants on the excess return metric. Stern Stewart discovered that to obtain more precise surplus-value figures, it needed to adjust accounting metrics for earnings and resources to apply this measure to real businesses[6]. As a result, EVA (Economic Value Added) is a residual income adaptation that many businesses have adopted[5]. The formula for calculating the EVA is as follows:

$$EVA = NOPAT - Capital Charge \quad (2)$$

$$NOPAT = EBIT - Tax \quad (3)$$

$$IC = \text{Total Debt} + \text{Equity} - \text{Long Term Debt} \quad (4)$$

$$WACC = r_D(1 - T) \left(\frac{\text{Debt}}{\text{Total Asset}} \right) + r_E \left(\frac{\text{Equity}}{\text{Total Asset}} \right) \quad (5)$$

$$r_D = \frac{\text{Interest Expense}}{\text{Long Term Debt}} \times 100\% \quad (6)$$

$$r_e = R_f + \beta(R_m - R_f) \quad (7)$$

$$r_e = R_f + \beta(\text{Equity Risk Premium}) \quad (8)$$

r_D = Cost of Debt

T = Tax Rate

r_E = Cost of Equity

R_f = Risk Free Rate

β = Beta Stock

R_m = Risk Market

The following criteria To determine a business add economic value or not can be used:

1. If $EVA > 0$, there has been economic value added to the company. The greater the resulting EVA, the more shareholders' expectations can be met by receiving a return on investment equal to or greater than the amount invested and creditors receiving interest. This indicates that the company has successfully created value for shareholders, implying its financial performance has been satisfactory.
2. $EVA < 0$, indicates that the company has no "economic value-added" because the available profits do not meet

shareholders' expectations. Thus, a lack of added value indicates poor financial performance.

3. EVA = 0, the company is in the break-even position, as all profits have been used to repay debts to funders, both creditors and shareholders.

III. RESULTS

A. Z-Score Analysis

1. Working Capital to Total Asset

This ratio represents the company's operational performance as a percentage of total assets. The working capital position is defined as the difference between its current assets and current liabilities.

TABLE I
WORKING CAPITAL TO TOTAL ASSET CALCULATION

Year	Working Capital (in Million IDR)	Total Asset (in Million IDR)	Working Capital to Total Asset	X1
2019	623,850	1,431,865	0.44	2.86
YoY	6%	9%	-2%	-2%
2018	588,324	1,316,789	0.45	2.93
YoY	12%	16%	-3%	-3%
2017	524,045	1,133,863	0.46	3.03
YoY	28%	20%	6%	6%
2016	410,197	941,097	0.44	2.86
YoY	52%	21%	25%	25%
2015	270,024	775,181	0.35	2.29
CAGR	18%	13%	5%	5%

According to the table above, the highest working capital was in 2017 and decreased from 2018 to 2019. At the end of 2017, Perum Jasa Tirta II's total assets stood at 1,133,863 million, up 20% or 192,766 million from 941,096 million in 2016. This increase was triggered by a 26.39 percent increase in Current Assets.

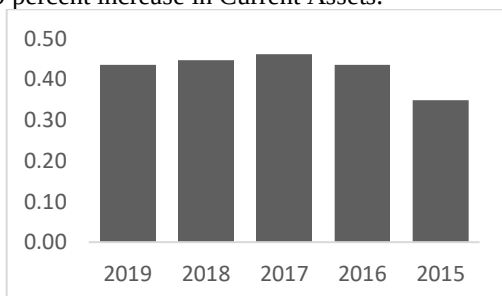


Fig. 2 Value of X1 Perum Jasa Tirta II Period 2015-2019.

Between 2015 and 2017, the value of X1 increased but decreased between 2018 and 2019. This decrease was attributed to declining working capital as a result of an increase in short-term liabilities.

2. Retain Earning to Total Asset

This ratio indicates a business's ability to generate retained earnings on its total assets. Retained earnings indicate how much of a company's revenue is not distributed to shareholders in the form of dividends.

According to the calculations, both retained earnings and total assets increased from 2015 to 2019. Even though

annual growth has slowed, this affects the results of the retained earnings to total assets calculation, which also increased from 0.59 in 2015 to 0.73 in 2019.

TABLE II
WORKING CAPITAL TO TOTAL ASSET CALCULATION

Year	Retain Earning (in Million IDR)	Total Asset (in Million IDR)	Retain Earning to Total Asset	X2
2019	1,047,765	1,431,865	0.73	2.39
YoY	12%	9%	3%	3%
2018	935,571	1,316,789	0.71	2.32
YoY	20%	16%	4%	4%
2017	777,761	1,133,863	0.69	2.24
YoY	27%	20%	6%	6%
2016	611,742	941,097	0.65	2.12
YoY	35%	21%	11%	11%
2015	454,747	775,181	0.59	1.91
CAGR	18%	13%	5%	5%

The ratio of retained earnings to total assets is then multiplied by 3.26 to obtain X2. It is known that X2 had a positive value in 2015, with 1.91 points in 2015 and 2.39 points in 2019.

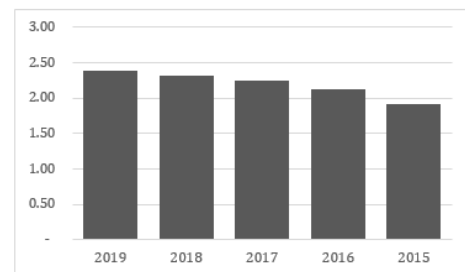


Fig. 3 Value of X2 Perum Jasa Tirta II Period 2015-2019

3. EBIT to Total Assets

This ratio indicates a company's ability to profit from its assets before interest and taxes are paid. Additionally, this ratio indicates the actual productivity of a business's assets.

TABLE III
EBIT TO TOTAL ASSET CALCULATION

Year	EBIT (in Million IDR)	Total Asset (in Million IDR)	EBIT to Total Asset	X3
2019	190,365	1,431,865	0.13	0.89
YoY	-20%	9%	-26%	-26%
2018	236,531	1,316,789	0.18	1.21
YoY	1%	16%	-13%	-13%
2017	233,650	1,133,863	0.21	1.39
YoY	4%	20%	-14%	-14%
2016	225,190	941,097	0.24	1.61
YoY	153%	21%	109%	109%
2015	88,904	775,181	0.11	0.77
CAGR	16%	13%	3%	3%

Earnings before Interest and Tax increased by just over 153% in 2016. This was because other expenses decreased from Rp.105,636 million to Rp.22,223 million (-79 percent) due to an Rp. 92,315 million tax correction in 2015. Although the CAGR is 16 percent, from 2016 to 2019, Perum Jasa Tirta II's EBIT decreased by an average of 5%, with the largest decrease of 20% occurring in 2019. This also results in a decline in the EBIT to Total Asset ratio from 2016 to 2019. Thus, the following figure depicts the value of X3 (EBIT to Total Asset multiplied by 6.727):

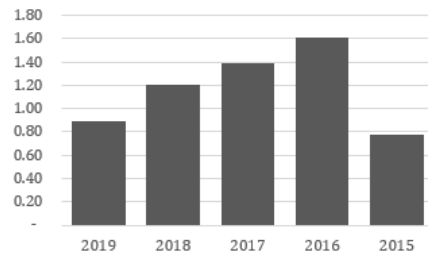


Fig. 4 Value of X3 Perum Jasa Tirta II Period 2015-2019

4. Book Value of Equity to Total Liabilities

The value of x4 is calculated from the Book Value of Equity to Total Liabilities multiplied by 1.05 (see figure below).

TABLE IV
BOOK VALUE OF EQUITY TO TOTAL LIABILITIES
CALCULATION

Year	Equity (in Million IDR)	Total Liabilities (in Million IDR)	Book Value of Equity to Total Liabilities	X4
2019	1,195,634.01	236,231.20	5.06	5.31
YoY	11%	-3%	14%	14%
2018	1,074,455.40	242,334.09	4.43	4.66
YoY	26%	-14%	47%	47%
2017	851,928.34	281,934.82	3.02	3.17
YoY	26%	6%	19%	19%
2016	675,292.38	265,804.12	2.54	2.67
YoY	31%	2%	29%	29%
2015	513,584.22	261,596.96	1.96	2.06
CAGR	18%	-2%	21%	21%

The highest growth rate was 47 percent in 2018, owing to a 14 percent decrease in total liabilities. This decrease was primarily due to a 38.72 percent decrease in accrual expenses and a 43.44 percent decrease in post-employment benefits liabilities, respectively.

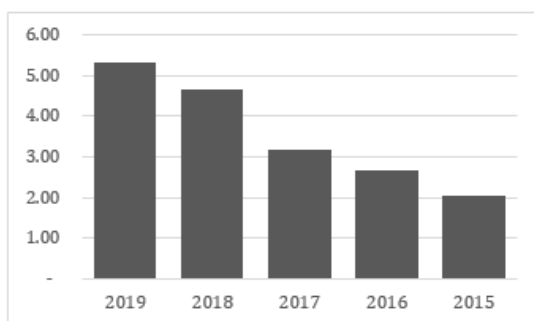


Fig. 5 Value of X4 Perum Jasa Tirta II Period 2015-2019

5. Z-Score Calculation

Calculate the ratio and multiply by the weight to obtain the values for X1, X2, X3, and X4. The table below contains the results of the Z-Score calculation for Perum Jasa Tirta II:

TABLE V
Z-SCORE RESULT

Year	Z-Score	Zone
2019	11.45	Safe Zone
2018	11.11	Safe Zone
2017	9.83	Safe Zone
2016	9.26	Safe Zone
2015	7.03	Safe Zone
CAGR	10%	
Average Score	9.74	

The highest Z-Score of the year is 11.45. The most significant increase occurred in 2016, when the Z-Score increased by 32% (from 7.03 to 9.26) due to significant increases in EBIT, Retained Earnings, and Working Capital. The slowest Z-Score growth occurred from 2018 to 2019, at 3%, despite remaining positive; this was due to a 20% decline in EBIT and a 2% decline in working capital. The Compound Annual Growth Rate (CAGR) illustrates the Z-growth Scores over five years from 2015 to 2019. The CAGR value for the Z Score Perum Jasa Tirta II is still positive at 10%, while the average Z-Score Result is 9.75. Therefore, this score is still within the Safe Zone.

From 2015 to 2019, Perum Jasa Tirta II is in a safe zone, with the Z-Score increasing year after year, as illustrated in the figure below.

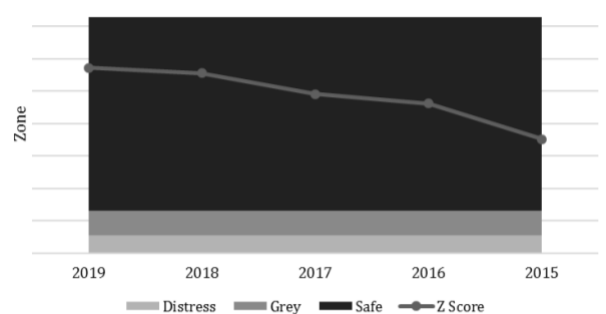


Fig. 6 Z-Score Zone of Perum Jasa Tirta II

B. Economic Value-Added Analysis

1. Net Operating Income After Tax (NOPAT)

NOPAT is calculated using two components: earnings before interest and tax plus tax, and the second is tax expense. The table below summarizes the results of the NOPAT calculation for Perum Jasa Tirta II from 2015 to 2019.

The highest NOPAT value was Rp.174,552 billion in 2017. However, the greatest growth occurred in 2016, totaling 213 percent, owing to a significant increase in EBIT and Tax. Taxes decreased by 48 percent in 2019 to

Rp. 36,556, in line with a 20% decline in EBIT to Rp190,365.

TABLE VI
NOPAT CALCULATION (IN MILLION RP)

Year	EBIT	Tax	NOPAT
2019	190,365	(36,556)	153,809
% YoY	-20%	-48%	-8%
2018	236,531	(69,935)	166,596
% YoY	1%	18%	-5%
2017	233,650	(59,098)	174,552
% YoY	4%	8%	2%
2016	225,190	(54,545)	170,646
% YoY	153%	59%	213%
2015	88,904	(34,301)	54,603
CAGR	16%	1%	23%

2. Invested Capital

Invested Capital is calculated as debt plus equity minus long term debt. The following table summarizes the results of the calculations:

TABLE VII
INVESTED CAPITAL CALCULATION (IN MILLION RP)

Year	Debt	Equity	Long Term Debt	Invested Capital
2019	236,231	1,195,634	94,892	1,336,973
% YoY	-3%	11%	20%	8%
2018	242,334	1,074,455	79,404	1,237,386
% YoY	-14%	26%	-43%	25%
2017	281,935	851,928	140,380	993,483
% YoY	6%	26%	-6%	25%
2016	265,804	675,292	149,376	791,720
% YoY	2%	31%	-11%	31%
2015	261,597	513,584	168,605	606,577
CAGR	-2%	18%	-11%	17%

Perum Jasa Tirta II invests its capital annually with a fluctuating growth rate. From 2015 to 2019, the CAGR of Invested Capital is 17%. The fastest growth occurred in 2016, as 2016 was also the fastest-growing year for equity (31 percent). As a result, the smallest long-term debt of Perum Jasa Tirta II was Rp.79,404 in 2018, a decrease of 43% from 2017.

3.4.1. Weighted Average Cost of Capital

Perum Jasa Tirta II emphasized the importance of reducing the debt-to-equity ratio. Due to the characteristics of State-Owned Enterprises, in which the government owns 100% of the shares. A strong capital base is required to support business expansion and market share retention. Management actively and routinely reviews and manages its capital to ensure the optimal capital structure and returns to Capital Owners, always considering the efficiency of capital use as measured by operating cash flows and capital expenditures.

From 2015 to 2019, the percentage of equity increased from 66 percent in 2015 to 84 percent in 2019. On the other hand, the Portion of debt decreased from 34% to 16% each year.

TABLE VIII
WACC CALCULATION (IN MILLION RP)

Year	2019	2018	2017	2016	2015
Portion of Debt	16%	18%	25%	28%	34%
Portion of Equity	84%	82%	75%	72%	66%
Total Asset	100%	100%	100%	100%	100%
Cost of Debt	7.00%	11.08%	7.64%	7.37%	5.40%
Tax	25%	25%	25%	25%	25%
Risk Free (Rf)	7.10%	7.97%	6.31%	7.92%	8.89%
Beta	0.49	0.77	0.06	0.47	0.18
Equity Risk Premium	5.77%	6.08%	7.06%	7.18%	8.72%
Cost of Equity (Re)	9.90%	12.67%	6.73%	11.29%	10.47%
WACC	9.13%	11.86%	6.48%	9.66%	8.31%

The cost of debt is calculated as interest expense divided by long-term debt. The highest cost of debt was in 2018 at 11.08 percent, owing to a 43 percent reduction in long-term debt from 2017. The lowest cost of debt was 5.4 percent in 2015. The calculation of the cost of equity is based on the capital asset pricing model (CAPM). The risk-free rate (Rf) is modified from the Indonesian 10-year government bond, with the highest value of 8.89 percent in 2015.

3. Economic Value-Added Result

Economic value added is the final calculation used to determine whether an investment at Perum Jasa Tirta II adds value each year. Overall, Perum Jasa Tirta II can generate a 50% increase in economic value between 2015 and 2019. The table below contains additional information.

TABLE IX
ECONOMIC VALUE-ADDED CALCULATION (MILLION RP)

Year	NOPAT	Capital Charge	EVA
2019	153,809	122,124	31,685
% YoY	-8%	-17%	60%
2018	166,596	146,815	19,781
% YoY	-5%	128%	-82%
2017	174,552	64,360	110,192
% YoY	2%	-16%	17%
2016	170,646	76,519	94,126
% YoY	213%	52%	2127%
2015	54,603	50,376	4,226
CAGR	23%	19%	50%

The most significant increase occurred in 2016, amounting 2,127 percent. This is due to the significant 213 percentage change in Net Operating Income After Tax (NOPAT). The highest EVA value was Rp110,192 in 2017, but it decreased significantly by 82 percent to Rp19,781 in 2018 due to a 128 percent increase in Capital Charge. The figure below illustrates the fluctuation of Economic Value Added.

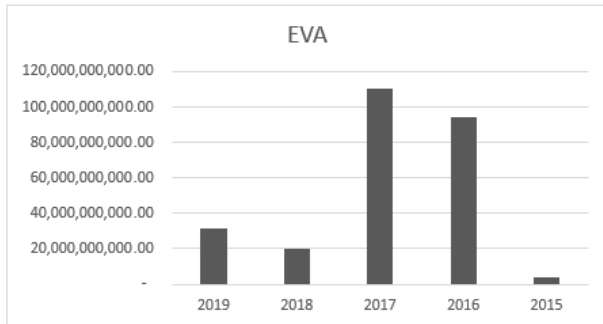


Fig. 7 Economic Value-Added Result of Perum Jasa Tirta II 2015-2019

4. Monte Carlo Simulation and Sensitivity Analysis

To determine the probability of Economic Value-Added success, the author employs Monte Carlo Simulation. The economic value-added calculations are used as the base case to determine the worst-case and best-case scenarios. The worst-case scenario is derived from the variable's minimum value, while the best-case scenario is derived from the variable's maximum possible value. With historical values data for 2015 to 2019, the author ran 1.000 simulations and visualized the results in a histogram to demonstrate the data's distribution. The histogram graph is constructed using intervals or midpoints on the horizontal axis and represents an absolute frequency.

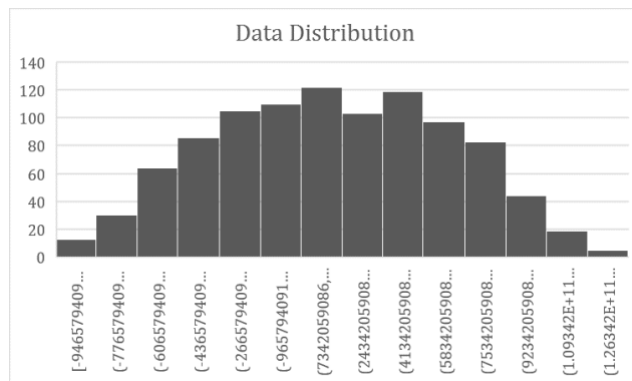


Fig. 8 Histogram of Data Distribution for Monte Carlo Simulation of Economic Value Added PJT II

The components on which the Monte Carlo is calculated are all related to the calculation of Economic Value Added. If all variables have minimal values, the economic value added is negative Rp30,364 million. For the best-case scenario, assuming that the maximum value is taken from each variable, the calculation result is Rp84,760 million.

After defining the worst-case and best-case scenarios for economic value added results using historical data from 2015 to 2019, it is necessary to calculate the probability of economic value-added being less than zero (EVA 0) statistically.

TABLE X
 WORST CASE, BEST CASE AND MONTE CARLO OF EVA
 PJT II (IN MILLION RP)

	Monte Carlo	Worst Case	Base	Best Case
EBIT	219,099	88,904	190,365	236,531
Tax	(54,129)	(34,301)	(36,556)	(69,935)
Debt	267,449	281,935	236,231	236,231
Equity	838,599	513,584	1,195,634	1,195,634
Long Term Debt	108,995	79,404	94,892	168,605
WACC (%)	11.00	11.86	9.13	6.48
NOPAT	164,970	54,603	153,809	166,596
IC	997,054	716,116	1,336,973	1,263,261
Capital Charge	109,676	84,966	122,124	81,836
EVA	55,294	(30,364)	31,685	84,760

According to random calculations performed using Monte Carlo simulation, the probability of failure during EVA is 34%.

TABLE XI
 DESCRIPTIVE STATISTIC OF MONTE CARLO
 SIMULATION FOR ECONOMIC VALUE ADDED PJT II

Descriptive Statistics	Result
Min	(95,778,711,592.92)
Max	138,766,013,760.65
Mean	19,930,830,388.04
Standard Deviation	49,856,262,731.27
Median	21,425,211,887.18
Kurtosis	(0.70)
Skewness	0.004
Prob EVA<0	34.47%

To determine which factors, require additional attention and have the greatest impact on changes in the Economic Value-Added results, a sensitivity analysis was conducted using 2019 data.

TABLE XII SENSITIVITY ANALYSIS

	Long Term Debt	Debt	Tax	Equity	EBIT
Current (2019)	94,892	236,231	(43,867)	1,195,634	190,365
-20% Swing	75,914	283,477	(29,245)	956,507	152,292
+20% Swing	113,871	188,985	(36,556)	1,434,761	228,438
Current EVA (2019)	31,685	31,685	31,685	31,685	31,685
-20% Swing EVA	29,952	27,370	24,374	53,528	(6,388)
+20% Swing EVA	33,419	36,001	38,996	9,843	69,758
Percentage -20% Swing	-5%	14%	23%	69%	-120%
Percentage +20% Swing	5%	-14%	-23%	-69%	120%
Absolute	11%	27%	46%	138%	240%

After swinging 20% of each component that affects the EVA calculation in either direction, the results are made absolute. The higher the absolute value, the higher the priority that must be maintained. Perum Jasa Tirta II must pay close attention to EBIT to ensure its continued growth, as it has a significant impact on the success of Economic Value Added (absolute value is 240 percent). Additionally, Perum Jasa Tirta II must maintain positive equity and growth year after year, as the sensitivity analysis results indicate that it has a 138 percent effect on the contribution of EVA in absolute terms.

V. CONCLUSION

The financial Performance of Perum Jasa Tirta II using the Altman Z-Score method is 9.74 (average), within the safe zone. Furthermore, overall performance remains stable year after year, and the score even increases, to the point where the CAGR Z-Score is 10%. (positive). Thus, based on the Z-score calculation for Perum Jasa Tirta II over the years 2015-2019, it has never experienced financial distress, indicating that this company is financially stable.

The financial Performance of Perum Jasa Tirta II using the economic value-added analysis from 2015 to 2019 is fluctuated but remained positive with a CAGR of 50%. This means that Perum Jasa Tirta II can continue to provide economic benefits to shareholders. EVA increased significantly by 2,127 percent in 2016. A Monte Carlo simulation is used to determine the probability of Perum Jasa Tirta failing in economic value-added. In the Monte Carlo simulation, 1,000 simulations are run to determine the probability that Perum Jasa Tirta II will experience an EVA failure ($EVA < 0$). The worst case is determined by taking the minimum value of each variable that contributes to EVA, and the best case is determined by taking the maximum value of each variable that contributes to EVA. The worst-case and best-case scenarios are used as the data range for the simulation. As a result, Perum Jasa Tirta II's probability of failing in economic value added is 34.47 %.

Sensitivity analysis is used to determine which variables require Perum Jasa Tirta II's attention (Long Term Debt, Debt, Tax Equity, and EBIT). This also indicates which risks Perum Jasa Tirta II should be maintain EVA score always positive. Based on the sensitivity analysis calculation. According to historical data for Perum Jasa Tirta II, the variables that have the greatest impact on EVA with an absolute value for a 20% swing are Earnings Before Interest and Tax (EBIT) and also Equity. Therefore, Perum Jasa Tirta II must maintain the two components above to maintain a positive EVA.

Perum Jasa Tirta II is still in a comfort zone with asset growth that is not too large, although financial distress is still far away. But in terms of earning, it is necessary to increase by increasing the revenue stream to re-explore the potential assets to increase profits.

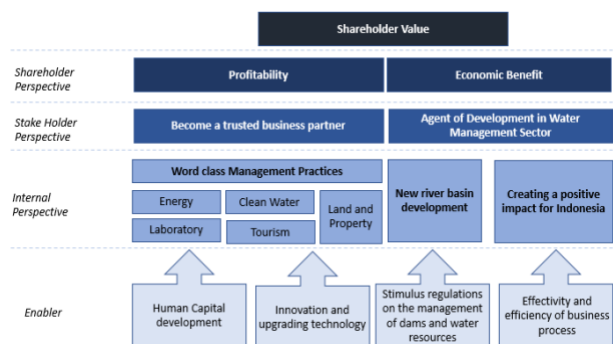


Fig. 9 Implementation Plan Strategy

The strategy begins with human capital development, innovation and upgrading technology, stimulus regulation, effectiveness, and business processes efficiency to achieve shareholder value. Perum Jasa Tirta II needs to transform these criteria by taking several corporate actions to support profitability and economic benefits.

To implement the strategy, necessary to carry out several processes, which can be seen in the plan below:

TABLE XIII CORPORATE ACTION PLAN

Enabler	Corporate Action Plan	Year 1	Year 2	Year 3	Year 4	Year 5
Human Capital development	Assesment Human Resource Existing					
	Conduct quality HR recruitment					
	Establish a competency-based performance measurement system					
Innovation and upgrading technology	Development of ICT Masterplan, IT Governance based on current best practice					
	Implementing IT master plan					
	Amendment to Government Regulation No. 7 of 2010 as the legal basis for PJT II as the mandate and management of Water Resources					
Stimulus regulations on the management of dams and water resources	Consolidating roles sharing between stakeholders by forming a stakeholder management unit					
	Analysis of the most optimum financing or investment structure for business development initiatives					
	Ensure the reliability of the reporting financial system					
Effectivity and efficiency of business process	Implementation of integrated risk management in organizational processes					
	Cost evaluation					
	Cost efficiency					

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