Financial Strategic Planning by Analyzing Performance Throughout Electricity Infrastructure Acceleration Project Period at PT X

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Abstract. PT X, as the only state-owned enterprise that holds the electricity supply business license in Indonesia, is required to implement government programs in achieving the national electrification ratio in the form of electricity infrastructure acceleration project which consist of 10.000 MW and followed by 35.000 MW or known as Mega Project in encouraging economic growth, investment, and industrial equity. In substance, this study identifies relevant financial factors during the infrastructure acceleration project period to measure the company's financial health in continuing the mega project which is included in Electricity Supply Business Plan issued by the Ministry of Energy and Mineral Resources. Using mixed-method, we analyze the company's financial health based on financial aspect health indicators issued by the Ministry of State-Owned Enterprises. Factors like sales growth, debt ratio, fixed asset ratio and cost management are evidently crucial to formulate strategic planning through pro forma financial statements in this case study.

Keywords: Electricity Company, Financial Performance, Health Indicators, Strategic Analysis, Pro Forma Analysis

1 Introduction

PT X is a state-owned company in Indonesia's electricity industry. Fully owned by The Government of Republic Indonesia, PT X has two major objectives, which are: (1) cultivating profits by carrying out the operation under the limited liability company principles; (2) becoming an agent in infrastructure development and electricity distribution. Hence, PT X has an important role in the public interest, as regulated in the Indonesian Constitution, to meet the electricity need throughout Indonesia territory. As the only state-owned enterprise that holds the electricity supply business license in Indonesia, PT X is bound to provide electricity supply that meets required quality and reliability standards while provides the best service to consumers and public needs.

In 2006, The Government of Indonesia assigned PT X to start the initial electricity infrastructure acceleration project called 10.000 MW. Later on, the project is proceeded into the second project called 35.000 MW in 2016. Known as Mega Proyek PLN, these projects demanded enormous funding whilst 10.000 MW, let alone needed at least 79 billion rupiahs. Based on Presidential Decree No. 14 in 2017, there are four approaches that can be undertaken by PT X to meet the increasing financing demand:

a) Optimizing the financial assets throughout company financing restructurization;

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b) Hedging according to foreign currency liability risk exposure profile;
c) Refinancing;
d) Utilizing the company's profit by minimizing the dividend payout ratio

Based on Electricity Supply Business Plan or formally known as Rencana Usaha Penyediaan Tenaga Listrik in Indonesia [1], the electrification ratio is set to 100% for the year 2020. In keeping up with the Mega Project, achieving the increasing electrification target will impact the company's financial condition. Entirely owned by The Government of Indonesia, PT X's liabilities are always rising because the source of financing is limited to internal funds, additional capital by shareholders (state capital participation) and liabilities which can be in the form of governmental two-steps loans, bank loans and bonds.

In 2019, PT X stated 655.7 billion rupiahs as its liabilities and it has decreased into 649.2 billion rupiahs in 2020. In the bargain, Indonesia's electricity consumption is falling in 2020 because of the ongoing global health crisis due to Covid-19 pandemic. It was projected 6.42% increasing in 2020, but company's total revenue has declined 3.95% compared to year 2019. Whilst, total income is affected by predetermined basic electricity tariff (TDL) which is on government's jurisdiction. There are electricity subsidy and compensation income to cover the difference in electricity operating cost, but it's not quite in sync with company's financing timeframe for the past few years. This will affect the company's revenues and cash flow activities, also financial leverage.

As one of the recognized state-owned companies (SOEs) in Indonesia, PT X is assessed its performance periodically by The Government of Indonesia under the Ministry of Stated-Owned Enterprises. The Decree of Ministry SOEs No. KEP-100/MBU/2002 stated health level assessment indicators to measure the level of company's health based on financial, operational and administration aspects.

With case study approach using mixed-method, this research analyzes the financial performance PT X during Mega Project and the financial strategic planning following the result. The first analysis will be conducted on previous financial reports started from year 2006 until 2020 to assess the company's financial health and identify the influencing major factor. Second, making financial projection for the next two years, which will be supported primer data resulted from interviews of related company's divisions. Third, arranging sensitivity and scenario analysis using Monte Carlo simulation to predict the financial health influenced by certain factors.

Based on context analysis, this study aimed to understand the PT X's financial performance under the electricity infrastructure acceleration project period and to evaluate the financial strategic steps which can be implemented in continuing the Mega Project. The rest of the research is structured as follows. Section 2 reviews the related empirical, case study, and theoretical literature. Section 3 provides a method to process the primer and secondary data, followed by an explanation of result findings in Section 4. Section 5 apprehends conclusion and recommendations.

2 Literature Review

2.1 Financial Health Assessment

In managing the company, especially in maintaining and developing the business, management is required to make the right policies and decisions that are suitable for the continuity of the company. Financial statement analysis is carried out with the aim of

evaluating performance and understanding the levers of management control, for example understanding the relationship between operational decision making and financial performance [2].

Ratio analysis is a common tool in analyzing financial statements. This quantitative method is used to get a description of liquidity, operational efficiency, and profitability profit. In virtue of financial statement analysis, the ability to accurately predict the financial health of a company is considered critical for investors, credit rating agencies, banks, auditors and the government and other interested parties. Performance analysis with historical data using financial statements can foresee future conditions of a company. This method has the perk of signaling if the company is or will be in a healthy financial condition or not, for example in an economic recession at that time [3].

Financial ratio analysis can identify strength and weakness of company by overseeing the relation between financial position report and income statement [4]. Commonly being applied to any other industrial sector, this financial ratio analysis is adopted along with comparative analysis to compose framework of financial health assessment in construction company. Financial performance analysis can also bring certain benefits such as overcome challenge, increase efficiency and profitability [5], these findings are found from a study of an Indonesian energy company using financial ratio analysis based on Ministry of SOEs Decree of health level assessment indicators.

An assessment of the financial condition is also applied on SOEs in Indonesia. It is regulated by Ministry SOEs Decree No. KEP-100/MBU/2002 regarding health level assessment which becomes formal guide for all non-financial services and financial services SOEs [6] . There are three aspects that become the main indicators of the assessment: financial, operation and administrative. Specifically for the financial aspect, the main focus of this research, has maximum weight of 50 for infrastructure SOEs and 70 for non-infrastructure SOEs as shown in Table 1.

Tabel 1. Indicators and Weight Health Assessment

Indicators	Weight Point	
	SOEs - Infrastructure	SOEs – Non Infrastructure
Return on Equity (ROE)	15	20
Return On Investment (ROI)	10	15
Cash Ratio	3	5
Current Ratio	4	5
Collection Periods	4	5
Inventory Turnover	4	5
Total Asset Turnover	4	5
Total Equity to Total Asset	6	10
Total Weight Point	50	70

(The Ministry of SOEs Decree No. KEP 100/MBU/2002)

Financial performance analysis based on Ministry SOEs Decree No. KEP-100/MBU/2002 had showed level of financial health in certain given time, it was adopted to assess companies' performance and evaluate financial obstacles in finding efficient and effective improvement [7]. It is also performed to determine company's performance consistency and stability in certain period which is a challenge that needs to be addressed [8][9].

2.2 Financial Strategy

Analysis of the company's financial performance will use measurements related to the company's financial statement historical data and look upon the perspectives of certain stakeholders. Financial strategy acknowledges the financial implications of strategic decisions of the corporate and business level also determines the best financial course of action. The purpose, scope, objectives, and strategy development must be defined by management in carrying out financial strategic planning. The first thing to do is to project financial statements in upcoming certain years to determine the funds needed to carry out corporate planning for the future. The components needed in carrying out financial planning are sales projection, pro forma financial statements and additional funds needed (AFN) [10].

Uncertainty in financial projections can be overcome through sensitivity analysis, scenario analysis or a combination of both through Monte Carlo simulations [2]. Monte Carlo simulation takes all uncertainty input variables into account to change at the same time. This method of simulation is expected to give prediction insight of future company's financial condition.

3 Method

The research uses case study approach to aim descriptive analysis in composing PT X financial strategic planning to continue Mega Project by assessing the financial performance during related timeline. There are four important aspects in conducting mixed-method research: timing, weighting, mixing, and theorizing. Mixed-method design is preferred in this study to incorporate qualitative and quantitative approach in giving nature understanding and data correlation in analysis process [11].

This research starts from problem identification, problem formulation, and literature study. Data collection is divided into two parts based on its nature. First part is secondary data collection, secondary data was obtained from audited financial statements in 2006-2020. These data were used in financial performance analysis which was conducted using health indicators assessment guidelines published by Ministry of SOEs. This process was done to obtain output in the form of ratio calculations and corporate health analysis. Second part is primary data collection, which was continued by conducting semi-structured interviews to obtain primary data from related internal sources. The qualitative method phase of interview was carried out with research weighting as supporting results of quantitative analysis. The next stage is the preparation of financial strategic planning to draw conclusions and suggestions.

Financial strategic planning was constructed by initially identify factors resulted from financial performance analysis which can affect the financial statements' components. These factors would be used as considered volatile factors that can impact pro forma financial statements to project upcoming company's financial condition. Composing pro forma financial statements used not only assumptions derived from historical financial information but also from macroeconomic analysis and government policy information related to SOEs, especially for PT X, published by mass media.

Monte Carlo simulation was carried out to perform sensitivity and scenario combination analysis on financial statements projection. In constructing pro forma financial statements, majority of assumption factors have uncertainty and risk. Monte Carlo simulation was executed by considering parameter assumptions as variables that have a certain distribution

type. Simulation mechanism was performed by assigning a certain probability distribution to each element in the projection using *Visual Basic for Applications* (VBA), an add-in Excel program [12]. Iteration of 5000 times was executed in the simulation to ensure normal distribution with tangible curve. Iteration will show the expected value of profit and AFN that might be happened.

4 Result and Discussion

4.1 Research Result

4.1.1 Financial Health Assessment Result

Tabel 2. Summary of Annual Health Assessment

Years	Score	Max Weight	Score per Weight	Category
2006	24	50	48	BB
2007	24.5	50	49	BB
2008	22	50	44	BB
2009	38.5	50	77	A
2010	39.5	50	79	A
2011	37.5	50	75	A
2012	30	50	60	BBB
2013	22	50	44	BB
2014	39.5	50	79	A
2015	21	50	42	BB
2016	23	50	46	BB
2017	21.5	50	43	BB
2018	23	50	46	BB
2019	25.5	50	51	BBB
2020	23.5	50	47	BB

(Secondary data processed)

Since the early years of the mega project, PT X has experienced quite fluctuate financial condition every year. The financial performance, as shown in Table 2, was resulted based on financial aspect indicators assessment. The result has shown that financial health level majorly still falls under category A, BBB and BB. Company's performance in 2009, 2010, 2011 and 2014 was categorized under Healthy but still had fluctuated point in sub-categories. Predominantly, the financial health level was still within the scope of the Less Healthy category in 2006, 2007, 2008, 2012, 2013, 2015, 2016, 2017, 2018, 2019 and lastly in 2020.

4.1.2 Pro forma Financial Statements

Table 3 shows the pro forma income statement projection for year 2021 and 2022 with negative income. Although there is a reduction in the financial cost, aligned with the debt reprofiling financing strategy with the aim to minimize debt interest, the projected operating profit has shown a negative position. This is due to decreasing rate of electricity growth

assumption, affected by covid-19 pandemic, as well as a sharp increase in operating expenses due to the distinct increasing ICP prices in 2021 and predicted will become stable in 2022.

Tabel 3. Pro forma Income Statement Year 2021e and 2022e

	Year					
	Δ	2020	Δ	2021e	Δ	2022e
Revenue						
Sale of electricity	-0.42%	274,898,464	4.05%	286,031,852	4.05%	297,616,142
Customer connection fee		312,725	4.05%	325,390	4.05%	338,569
Government electricity subsidy		47,988,114	APBN	53,600,000	APBN	61,830,000
Compensation income		17,904,508	BKF	27,700,000	BKF	27,700,000
Others	63.08%	4,311,826	4.05%	4,486,455	4.05%	4,668,156
Total Revenue		345,415,637		372,143,697		392,152,867
Operating Expenses						
Fuel and lubricants		106,014,285	129.77%	137,571,020	101.35%	139,425,515
Purchased electricity		98,651,604	129.77%	128,016,727	101.35%	129,742,427
Leases		3,101,334	129.77%	4,024,492	101.35%	4,078,744
Maintenance		21,940,509	129.77%	28,471,429	101.35%	28,855,232
Personnel	-0.23%	24,965,707	-0.23%	24,908,286	-0.23%	24,850,997
PPE depreciation	13.34%	36,662,917	13.34%	41,552,611	13.34%	47,094,439
Right-of-use assets depreciation	0.90%	2,479,663	0.90%	2,502,030	0.90%	2,524,599
Others	2.62%	7,192,146	2.62%	7,380,580	2.62%	7,573,951
Total Operating Expenses		301,008,165		374,427,176		384,145,904
Operating Profit		44,407,472		(2,283,479)		8,006,963
Other income/(expenses) - net		1,916,966				
(Loss)/gain on foreign exchange - net		(7,742,152)				
Finance income		1,125,519				
Finance costs	-10.40%	(27,415,886)	-10.40%	(24,564,634)	-10.40%	(22,009,912)
Profit before tax		12,291,919		(26,848,113)		(14,002,949)
Income tax expense	22%	(6,298,491)	22%	0	20%	0
Profit for the year		5,993,428		(26,848,113)		(14,002,949)

(Secondary data processed)

The statement of financial position projection can be carried out with the objective to estimate the additional funds needed to improve the company's performance (AFN). AFN can be calculated by subtracting the total assets by the total liabilities and equity. Table 4 shows that companies are estimated in need additional funds of 59.89 trillion in 2021 and 93.19 trillion in 2022 in accordance with the increasing total assets value due to Mega Project. The calculation of increasing asset value uses increasing level of asset value assumption in 2020 of 4.06%. The portion of non-current assets is always above 90% of total assets, indicating asset growth will always increase in the same manner with the progress of Mega Project.

Tabel 4. Pro forma Statement of Financial Position Year 2021e and 2022e (in million rupiahs)

	Year					
	Δ	2020	Δ	2021e	Δ	2022e
Non-current assets	4.06%	1,491,906,463	4.06%	1,552,488,663	4.06%	1,615,530,939
Current assets						
Cash and cash equivalents	71 days	54,735,434	71 days	72,389,596	71 days	76,281,791
Trade receivables - net	22 days	21,278,416	22 days	22,430,579	22 days	23,636,611
Inventories	13 days	10,277,289	19 days	19,371,864	19 days	20,413,437
Receivables and other current assets		10,862,179		13,635,928		12,686,868
Total Current Assets		97,153,318		127,827,966		133,018,707
Total Assets		1,589,059,781		1,680,316,630		1,748,549,646
Equity		939,812,592		944,812,592		952,312,592
Non-current Liabilities		499,587,950	4.06%	519,874,837	4.06%	540,985,518
Current Liabilities		149,659,239	4.06%	155,736,487	4.06%	162,060,516
Total Liabilities		649,247,189		675,611,324		703,046,033
Total Equity and Liabilities		1,589,059,781		1,620,423,916		1,655,358,625
AFN		-		59,892,714		93,191,021

(Secondary data processed)

4.1.3 Monte Carlo Simulation Result

Tabel 5. Monte Carlo Simulation Result (in million rupiahs)

Variabel	Median	Mean	Low	High	% <=0	% >0
Year 2021:						
Profit	3,291,841	1,119,916	34,849,424)	48,029,051	24.78%	75.22%
AFN	39,620,646	41,123,529	(66,236,834)	142,689,968	7.26%	92.74%
Year 2022:						
Profit	(27,474,232)	(26,908,731)	(73,560,564)	20,732,169	94.92%	5.08%
AFN	154,247,729	55,753,129	53,777,330	294,933,378	0%	100%

(Secondary data processed)

Table 5 shows Monte Carlo simulation result for the variable profit for the year and AFN. The projection for 2021 shows the expected value represented by mean with the value of 11,119 trillion. The median value of 13.29 trillion also shows the closeness of the value to the mean so that the simulation results have a normal distribution curve. This illustrates that with the range of values that have been set in the parameter assumptions, the company is predicted to achieve a profit for the year of 11,119 trillion. The result of this simulation also shows that the portion of 24.78% of the iteration results has a negative value, and vice versa that there is a portion of 75.22% that gets a positive value. On the other hand, Monte Carlo simulation result of profit for the year in 2022 has predicted lower value. The company is predicted to have a negative profit with a portion in the iteration results more than 94.92%.

Based on the result of the Monte Carlo simulation, in 2021 the company is predicted in need of additional funds of 41.12 trillion and 155.75 trillion in 2022 in carrying out mega projects. However, in 2021, there is a possibility 7.26% that the company will have a negative AFN from the iteration results while there is no possibility of a negative AFN in 2022. A negative AFN indicates that the projection that have been made shows that the company could has excess capital than what the company needs. The excess capital can be used later for short-term investments.

4.2 Discussion

Using financial performance analysis as the first step in composing pro forma financial statements is strategically applied to make certain term business plan such as financial statements projection, ratio, financing and capital plan [13]. Monte Carlo simulation also use historical data to be simulated with random numbers to estimate the profitability in given period, the result can be used to envision financial performance in the future [14]. The findings of from this case study suggests that financial performance analysis can identify volatile factors during electricity infrastructure acceleration project period and evaluate the upcoming financial performance strategically using steps like pro forma financial statements and Monte Carlo simulation.

The first result from the study shows PT X has changing financial health level, fluctuating between Healthy and Less Healthy during the fifteen years period. There are several main components that are considered volatile that can affect the financial performance:

4.2.1 Operating Income

Operating Revenues, as presented in the Consolidated Financial Statements, consist of Sale of Electricity, Customer Connection Fee, Government Electricity Subsidy, Compensation Income, and Others in the form of other services. Sale of Electricity have the largest portion of Operating Revenue because it is related with the company's main business process. Components of Operating Income will affect the performance of profitability, liquidity and activity. Sale of Electricity are affected by the electricity consumption and its growth is projected in the RUPTL every year [15]. Subsidy and compensation are also to be considered in operating income changes.

4.2.2 Operating Expenses

TDL adjustment will be made if there are changes of the factors in the basic calculation of electricity supply cost, such as the dollar exchange rate compared to rupiah, the Indonesian Crude Price (ICP), and the national inflation rate [16]. The largest portion of PT X's Operating Expenses is fuel and lubricants as well as the purchase of electricity from IPP. ICP still plays a major role in changing the energy consumption of non-EBT power plants in electricity production. Changes in Operating Expenses component will affect profitability and activity performance.

4.2.3 Asset

PT X started revaluing its assets in 2015 which caused a noticeable increase in asset value, the asset revaluation method has also been carried out periodically every 2 years. With the mega project, the projected assets value every year will increase significantly which is also expected to provide an increase in sale of electricity. Thus, asset component will affect liquidity and solvency performance.

4.2.4 Debt

The main source of funding for PT X is liabilities in the form of loans from the government and any other external sources. The increase in liabilities will also affect the increase in financial expenses. Substantially, debt component will affect liquidity performance.

The second result shows that pro forma financial statements become the base of Monte Carlo simulation to predict the profitability and AFN. The biggest challenge for PT X in this time being is cost management which is something that can be controlled internally for efficiency. However, externally, the increasing of Indonesia and the world's economic growth since 2020 can cause an increase in the ICP which statistically until June 2021 has reached $65.49 per barrel. This will greatly affect operating expenses in 2021 significantly if the ICP's trend continues to increase, resulting in negative operating profit.

This study has contributed the literature about strategic planning based on financial performance analysis, especially in the electricity sector both in Indonesia and Asia. Whilst, not many studies that can bring insight about internal and external factors in certain sector, which can be derived form financial performance analysis, that can affect the state-owned companies' performance. PT X is a state-owned enterprise with a fairly large size which has the largest asset value in Indonesia, this can be explored on wider scale or empirically to ascertain the occurrence of same result.

5 Conclusion

Based on the results, although the financial health level analysis result of PT X is categorized as A, BBB and BB that can be divided into two categories, which are Less Healthy and Healthy since 2006. We able to determine factors that have uncertainty and risk based on the analysis of financial performance which can influence the components in the Financial Statements. Prediction of profit for the year and AFN can assist management in developing strategic financial planning, especially obtaining funding sources for the sustainability of Mega Projects. For this reason, PT X still can continue the Mega Project with the support and commitment from Government of Indonesia especially in obtaining funding through lending also domestic policies related to subsidy, compensation, and power plant energy-mix pricing.

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