

Assessing and optimizing the internal financial aspects for increasing the national logistics distribution mode

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ABSTRACT

Dumai-Malacca international Ro-Ro port connection is a strategic plan of Indonesian government to increase the national logistics distribution mode, especially in Southeast Asia regional trading activities. PT. Pelindo I, as an SOE port operator, is the candidate who will get a delegation for the implementation of this strategic program for providing port facilities to meet the needs of international crossings. This study aims to assess and optimize the internal financial aspects of PT Pelindo I as the result of the project implementation. As the company with a capital intensive character, corporate action must be able to provide good returns and benefit with clearly mitigated risks. Results show port should provide at least on moderate threshold level of occupancy. The less occupied operation will lead to financial problem along the service life. Thus, the least reliable scenario used is scenario 2 with realistic occupation level of 61%, IDR-USD currency rate of IDR.14600, and inflation rate of 3.97%, along with the recommendation for implementing subscription register method between ports and customer. The ROA and ROE result 0,83% and 0,89% respectively, and will remain positive along with revenue generation. These are considered to be effective in producing good financial performance and guarantee long-term business sustainability, while it can also optimize the absorption of service use by commodity based industries that the product will be distributed in the Southeast Asia region.

Keyword: Optimization, Financial, Capital Intensive, Risk

Introduction

Port business is categorized as a capital intensive enterprise with the dominance in generating revenue from asset investment activities in large proportion compared to spending from operational activities from work done by manpower. Therefore, the port business has a quite significant risk on potential asset depreciation (Fraser et al., 2020; Indrayani, 2018). In addition, The challenge is how to maintain the company aggregate ROA and ROE in order to maintain a reliable operation ratio.

This paper describes a case study in Dumai-Malacca international Ro-Ro port connection which it is a strategic plan of Indonesian government to increase the national logistics distribution mode, especially in Southeast Asia regional trading activities (Arimbhi et al., 2021; Rifardi et al., 2020). Moreover PT. Pelindo I, as an SOE port operator, is the candidate who will get a delegation for the implementation of this strategic program for providing port facilities to meet the needs of international crossings.

Methodology

The analysis is carried out by assessing on how the company's financial performance through financial reports and the projection of financial performance due to financial activities occur on Ro-Ro Dumai-Malacca project. This research adopts a case study approach to

uncover data and obtain results. Case study research can generate in-depth and detailed results (Crowe et al., 2011; Rashid et al., 2019).

Assessment in this study is also carried out through the analysis of the main financial indicators NPV, IRR, Payback Period, and by evaluating the projected ROA and ROE performance. The above method is a tool for measuring financial performance in several business units for many cases (Panigrahi et al., 2014; Sianipar & Kuswardono, 2018).

Results

The analysis is carried out by assessing on how the company's financial performance through financial reports and the projection of financial performance due to financial activities occur on Ro-Ro Dumai-Malacca project. Assessment is also carried out through the analysis of the main financial indicators NPV, IRR, Payback Period, and by evaluating the projected ROA and ROE performance.

A. Financial analysis and indicator

The company performance can be seen from company's 2019 annual report through operating and operating ratio as the following Table 1. It shows the company aggregate performance which describes how the

performance over a period of 5 years. Performance has decreased followed by the decreasing in ROE and ROA, but Total Asset to Equity has increased quite significantly and recorded a positive value in the changes in 2018 - 2019. This shows that there is investment activities conducted by the company and has not generated the return or profit yet.

Table 1. Company Operating Ratios 2019

Operating Ratios (%)	CAGR	2019	2018	2017	2016	2015
Operating Profit to Revenues	-22,84%	9,89	38,41	38,80	41,34	36,15
Operating Profit to Equity	-27,55%	4,64	18,46	21,76	23,15	23,25
Operating Profit to Total Assets	-34,70%	1,83	8,53	12,55	13,64	15,41
Net Profit Margin	-16,60%	12,07	29,29	29,21	30,45	29,92
Return on Equity (ROE)	-18,57%	9,84	45,10	29,39	26,90	27,49
Return on Assers (ROA)	-29,38%	2,24	6,50	9,45	10,05	12,75
Total Asset to Equity	10,93%	253,47	216,39	173,47	169,75	150,87

Budget is calculated based on the consultant's estimation along 5 major item categories; jetty, storage, parking area, and custom facilities with total investment Rp.56.829.739.704. The investment is carried for two years with proportion 40:60 for the first and the second year with interest 11%. WACC is calculated using the CAPM method with parameter; Risk Free Rate 5% based on BI interest rate December 2019, Market Return 11.86% based on 2009-1019 IHSG CAGR calculation, and Beta 0.94 based on the Beta reference for average port service according to PT Pelindo 1 data. Base on these data the WACC is 11.23%.

Demand calculation is needed to obtain a basic revenue projection. The design is carried out from the previous generation and distribution of passengers and cargo table, then it is used to calculate the frequency of annual ships that can be scheduled to meet these needs. It is found that the vessel frequency grows from 156 trip per year to max 256 trip per years along 2021 to 2050. This parameter is the basic indicators for demand to generate additional services. Company needs to convert demand into various forms of services that can be integrated into port services. The contribution of operational demand is very dependent on regional economic conditions, as carried out with reference to the inflation rate. In addition, fluctuations in market response can be adjusted through the application of tariffs (Table 2) to be used for each of the business services provided. So that this condition can be balanced and remain in order to provide benefits to the company and the company also follows the prevailing regional economic levels. Schematically this is as well as become the port business model frame work.

Table 2. Tariff

Service	Tariff	Unit
Passenger PAS	50.000	IDR/Passenger
Truck PAS	13,11	USD/Truck
Vessel service	6.370.920	IDR/Vessel
Mooring	0,14	USD/GT
Berthing Time	1	Etmal
Vessel GT used	3,123	GT/Vessel
Cargo storage	0,50	USD/Ton/Massa
Visitor parking	4.000	USD/Hour

Sensitivity analysis is performed through three assumptions which labeled Scenario 1, 2, and 3; pessimistic, realistic, and optimistic, respectively. Using the economic cycle term these three assumptions are also defined as; Economic Recession, Economic Growth, Economic Boom. In conducting analysis for each phase of the economic cycle, economic indicators are used that represent each macroeconomic condition such as; occupancy, currency, and inflation rate. From data and analysis, each macroeconomic indicator in each scenario is given on the Table 3.

Table 3. Scenario Parameter

Indicator	Pessimistic	Realistic	Optimistic
Occupation rate	20%	61%	142%
IDR - USD Currency	16824	14600	12506
Inflation rate	7,26%	3,97%	1,32%

Subsequently, the gross profit is adjusted according to MACRS depreciation, interest, and tax in order to obtain the respective forecasts for EBIT, EBT, and Net Income. Completing the calculation for each scenario leads to the result of NPV, IRR, and Payback Period as on Table 4.

Table 4. Scenario Financial Indicator Result

Financial Indicator	Recession	Growing	Boom
IRR	6,33%	9,97%	14,93%
NPV	(22.405.118.014,40)	(6.373.582.106,42)	20.805.261.430,06
PP (Year)	18,39	13,59	9,41

B. Comparison analysis

Comparisons are conducted to the company's current financial performance, especially on the two main indicators of ROE and ROA. The calculation is conducted for various combination of scenario parameter. Results are given in the following graphs.

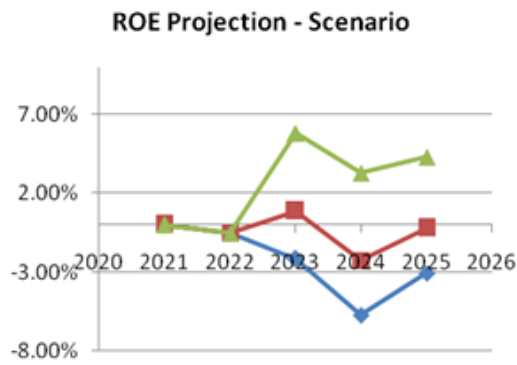


Figure 1. ROE Projection

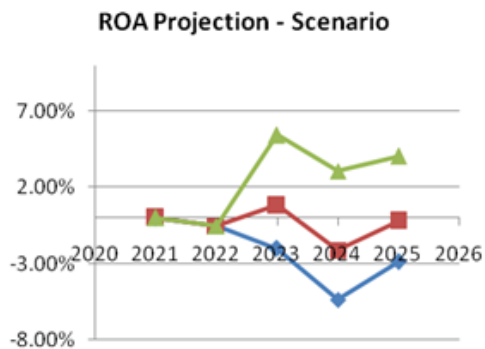


Figure 2. ROA Projection

ROA and ROE projections generally show a consistent pattern where Scenario 1 is in a negative projection, Scenario 2 is in the projection in the positive and negative mixed area, while scenario 3 is in a positive projection. In addition, simulations are

also carried out by performing random combinations of existing parameters and the results are relatively consistent with the sensitivity analysis where occupancy is the parameter that has the highest sensitivity. These results can be seen in random combinations with occupancy of 20% showing the projection results in the negative range, random combinations with occupancy of 61% show the projection results in mixed positive-negative ranges, while random combinations with occupancy 142% show the projection results in the positive range. So that these results prove that the simulation is consistent and convergent as the approach taken

C. Compilation and Alternatives

From the sensitivity and comparative analysis, it concludes 3 alternatives that can be used by management regarding financial assessment of expansion project, which are; Rejected (Scenario 1), Acceptable (Scenario 2), Preferable (Scenario 3). From these alternatives, assessment is carried out with a focus on the aspects of applicability, impact, attractiveness, and competitiveness. The analysis is carried out qualitatively by using a score of 1-5, from the worst to the best for each of the assessment criteria. The objective of the assessment is to find out which alternative has the best result where the calculation is done by performing arithmetic sums with evenly distributed weights, besides that, calculations are also carried out using the mean average score. Then the results are used as recommendations. The assessment results are given in the following table:

Table 5. Alternative Assessment

Applicability									
Criteria	1	2	3	4	5	Remark	Score	Arithmetic	Weighted
Fair tariff			3			1-5 : Too many restriction - No burden	3	7	3,5
Aggressive marketing penetration				4		1-5 : No demand - Demand available	4		
High tariff	1					1-5 : Too many restriction - No burden	1	6	3
Subscription					5	1-5 : No demand - Demand available	5		
Diversify services				4		1-5 : No demand - Demand available	4	6	3
Providing facilities		2				1-5 : Require new investment – Available	2		

Impact									
Criteria	1	2	3	4	5	Remark	Score	Arithmetic	Average
Fair tariff		2				1-5 : loss – profit	2	6	3
Aggressive marketing penetration				4		1-5 : less customer - more customer	4		
High tariff					5	1-5 : loss – profit	5	10	5
Subscription					5	1-5 : less certainty - more certain	5		
Diversify services			3			1-5 : loss – profit	3	7	3,5
Providing facilities				4		1-5 : less customer - more customer	4		

Attractiveness									
Criteria	1	2	3	4	5	Remark	Score	Arithmetic	Average
Fair tariff			3			1-5 : less valuable - more valuable	3	7	3,5
Aggressive marketing penetration				4		1-5 : less convenience - more convenience	4		
High tariff	1					1-5 : less valuable - more valuable	1	6	3
Subscription					5	1-5 : less valuable - more valuable	5		
Diversify services			3			1-5 : less valuable - more valuable	3	6	3
Providing facilities			3			1-5 : less convenience - more convenience	3		



Competitiveness									
Criteria	1	2	3	4	5	Remark	Score	Arithmetic	Average
Fair tariff		2				1-5 : below market - above market	2	6	3
Aggressive marketing penetration				4		1-5 : less - more contribute to market share	4		
High tariff	1					1-5 : below market - above market	1	6	3
Subscription					5	1-5 : less - more contribute to market share	5		
Diversify services				4		1-5 : below market - above market	4	8	4
Providing facilities				4		1-5 : less - more contribute to market share	4		

Discussion

Compilation results the highest pairing recommendations made on alternatives 1, 2, and 3 is in Alternative 2 with actions that must be taken by the company in the form of applying relatively high rates but through the subscription register method. High tariffs will indeed be a challenge for the company, but this is an acceptable approach because the service carried out is an international crossing with a better service than the existing services available. This research supports the results of the international crossing distribution study to provide the best service for consumers (Fida et al., 2020).

In addition, the application using a subscription will increase the level of certainty, especially in customer utilization. And of course, through the subscription mechanism, customers will get services and access that are more exclusive and more private than existing services. By combining these two alternatives, the precedent for high tariffs will be fulfilled because customers will get more priority and service. On the other hand, port operator companies can also book better profits through a better level of consumer certainty. As has also been in other studies that the best service for consumers can increase profits for the company (Darmawan et al., 2018).

Conclusion

Companies must ensure that the financial aspects are secure and sustain the business in the long run, by assessing ROA and ROE from the enterprise financial performance. It is important to evaluate various aspects in terms of profit generation in order to identify and provide the most sensitive options for management to choose. In the end the assessment, decision making carried by management is not only related to project finances but also how is the alternative and option will be driven so that the scenario can actually have an impact on the business. Due to the difficult economic conditions, a reliable recommendation is to choose scenario 2 with the alternative in the form of subscription. This selection is considered highly recommended because of the guarantee that can maintain business continuity through service collaboration

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