Recommendations for Land Value of Non-Cash State Capital Participation (PMN) for Optimal Property Development in Plaju Assets, Palembang

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ABSTRACT

Through Presidential Decree No. 117 of 2015, PT Hutama Karya (Persero) received an assignment from the government to build and manage the Trans Sumatra Toll Road concession. This situation has made the company form which was previously a Construction Services company, into a Construction and Toll Road Management company. To provide this project, both cash and non-cash funding are needed. Through Non-Cash PMN, the company gets capital in the form of land to be developed so that it becomes additional working capital for the company to develop the Trans Sumatra Toll Road. In the context of utilizing Non-Cash PMN, it is necessary to analyze the highest & best use of the given land, as well as determine the best form of development that can be carried out on the land. Based on these things, the company seeks to conduct financial analysis and feasibility studies of the non-cash PMN asset utilization project that has been obtained. The process of financial analysis and feasibility studies were carried out using Discounted Cash Flow (DCF) and Capital Budgeting Analysis in determining investment decisions for this project. Based on the results of the analysis and feasibility study, will determine the value of the land in accordance with the needs of PT Hutama Karya (Persero) to the Government, so that the Non-Cash PMN assets can provide added value for the company. Based on the projections, the real estate development scheme gives better results than ready to build area scheme. To achieve the minimum investment requirement of the company, HK will propose a value of Rp 73,775 per m² and a maximum of Rp 113,500 per m².

Keywords: Discounted Cash Flow, Financial Analysis, Land Price, Non-Cash Capital Participation.

I. INTRODUCTION

Indonesia Government through the Ministry of Finance initiated additional State Capital Participation (PMN) to PT Hutama Karya (Persero) as a State-Owned Enterprise (SOE / BUMN) which received a mandate from the Government to assign toll road concessions in Sumatra in accordance with Presidential Regulation of the Republic of Indonesia Number 100 issued in 2014 as amended by Presidential Regulation of the Republic of Indonesia Number 117 issued in 2015 concerning the Acceleration of Toll Road Development in Sumatra.

Not only in cash, but it is also proposed that additional PMN will be given in the form of non-cash to support the completion of the construction of the Trans Sumatra Toll Road (JTTS) and reduce the state’s fiscal exposure as a form of creative financing through the identification of State Property (BMN) which can be used as an alternative to PMN.

Through the BMN transfer mechanism, BMN in the form of non-productive land which will be given as a non-cash PMN will be optimized by PT Hutama Karya (Persero) into productive assets and has added value (leverage) so that it can improve the capital structure and increase the Company's business capacity to support the implementation of the assignment JTTS project development.

The main objective of this final project is to determine the land value for Plaju asset development based on the financial requirement from Company’s investment manual such as Net Present Value (NPV), Internal Rate of Return (IRR), and Payback Period.

HK’s Investment Manual have 6 aspects that must be fulfilled for the investment plan to be accepted, this research was conducted with limitation on financial and risk aspect of optimizing vacant land into selected scheme development.

II. LITERATURE REVIEW

Feasibility Study is conducted to find out whether the project carried out is feasible or not. Feasibility studies and project evaluations aim to assess the feasibility of a business/project plan. The result of the assessment is used as consideration for decision makers to reject or accept the planned business/project.

To find out if the Plaju development is feasible, the first step is conducting a highest and best use analysis, Highest and
best use are defined as ‘the most probable use of a property which is physically possible, appropriately justified, legally permissible, financially feasible, and which results in the highest value of the property being valued (IVSC, 2005). This analysis has been carried out by Coldwell Banker Indonesia.

Discounted Cash Flow (DCF) is used for the investment valuation and define the result of feasibility study. The two approaches within the Discounted Cash Flow (DCF) technique are the Net Present Value (NPV) and Internal Rate of Return (IRR) (Douglas, 2008) which written as follows:

- **Net Present Value**

  \[
  NPV = \sum_{t=1}^{n} \frac{CF_t}{(1 + i)^t} - CF_0
  \]

- **Internal Rate of Return**

  \[
  0 = NPV = \sum_{t=0}^{N} \frac{CF_n}{(1 + IRR)^n} = CF_0
  \]

For the risk analysis, author using a Monte Carlo simulation to define the variables that must be mitigated in this project development. The simplest form of Monte Carlo simulation is a random number generator that useful for forecasting, estimating, and risk analysis. The simulation calculating numerous scenarios of a model by repeatedly picking values from a predefined probability distribution for the uncertain variables and using those values for the model (Mun, 2006).

There are five steps for the simulation processes, the first and second steps are specifying the model and distribution for each variable in the model. Simulations require models of how the project profits generated, including how much the income levels and costs. The third step determines one outcome as a profit level. Repeat the procedure and the last one is calculating the NPV (Ross et al., 2010).

### III. METHODOLOGY

This research is using qualitative and quantitative methods. A market study has carried out on the Plaju Regency area by independent consultant for primary data collection. Calculations were also made with quantitative data processing using Microsoft Excel to analyze the data obtained and projected calculations for feasibility studies.

### IV. FINDINGS AND ARGUMENT

#### A. Proposed Development Scheme for Plaju Asset

After conducting a financial analysis between the two development schemes where the land price variable uses the market price that has been submitted by the Independent Valuer, it is found that these two development schemes are not feasible and cannot be implemented. From these two development projections, the best scheme is taken, namely Real Estate Development and then used to find recommendations for land values to HK.

![Fig.1 Research Framework](image-url)
B. Land Value Recommendation for Plaju Asset

To determine the value of the land recommendation is done by trial-and-error input for variable land value, namely entering the target value of IRR in accordance with the target of the investment manual calculation, or by 13.64% and the analysis is carried out. The following is the result of the estimated land value that will be used as a land value recommendation in accordance with the investment manual requirements. After trial and error to determine the value of the land, the land value recommendation was Rp 113,500 per sqm. The projected Capital Budgeting Analysis for this development is shown in Fig. 2.

C. Risk Mitigation Using Sensitivity Analysis

Sensitivity analysis is used to determine the impact of changes in variable. The analysis is also useful for anticipating if the variables change, at what level the project is feasible to the implementations. The variable sensitivity to the project IRR is shown in Fig. 3.

D. Risk Mitigation using Monte Carlo Simulation

The Monte Carlo simulation calculates numerous scenarios of a model by repeatedly picking values from a predefined probability distribution for the uncertain variables and use those values for the model. The free variable used in this Monte Carlo calculation is a variable that as already mentioned in the sensitivity analysis with the upper and lower limits pay attention to the historical data obtained. The following are the results of risk analysis using the Monte Carlo method with 1000 iteration calculations for Real Estate development scheme.

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<th>TABLE I: DEVELOPMENT SCHEME COMPARISON</th>
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<td>Development Scheme</td>
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<th>TABLE II: PROJECTED DEVELOPMENT STATISTIC PROBABILITY</th>
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Fig.2 Projected Capital Budgeting Analysis.

Fig.3 IRR Sensitivity.
From 1000 times of iterations, In the NPV calculation, the smallest NPV result is -145 billion rupiah, and the highest result is at 124.7 billion rupiah with the average data being at 14.3 billion rupiah. From the 1000 results of these iterations, it could be concluded considering the 64% estimated data of NPV probability will produce a positive NPV thus this projected scenario is most likely financially feasible.

V. CONCLUSIONS

Based on the calculation results of the two development schemes, it is concluded that each development scheme has its own advantages and disadvantages. Based on the research objectives, it was found that the recommended land price to be submitted to DJKN was Rp 113,500, - per sqm for the price of land for development in Plaju. This price is recommended considering that from the calculation of 2 development schemes carried out using a market price Rp 562,415 – per sqm, both calculations cannot produce financial feasibility in accordance with the feasibility rules and does not meet the requirements of the company based on the investment manual owned by PT Hutama Karya (Persero). By recommending a value of Rp 73,775 per sqm in accordance with the projected best case, it will provide space for PT Hutama Karya (Persero) to accommodate the price that will be provided by DJKN up to the baseline figure of Rp 113,500 per sqm.

For the Plaju asset development scheme, the author recommends PT Hutama Karya (Persero) to develop the Full Real Estate Development scheme. This is based on the results of calculations carried out, in terms of financial feasibility Full Real Estate Development provides higher feasibility results than Ready to Build Area Development. Based on the results of the sensitivity analysis previously discussed, the risk of cost of goods sold being realized that exceeds the projections that have been prepared will cause the feasibility of this project to decrease. It is necessary to evaluate and work efficiency in the field so that these costs do not exceed the previously determined budget. Another risk that needs to be mitigated is Price Realization per Unit for Houses where the risk of price realization is below the predetermined projection. The sales team needs to put in extra effort to be able to sell the products according to the projections.

REFERENCES


