

CAPITAL BUDGETING ANALYSIS OF INVESTMENT PROJECT FEASIBILITY IN PT INTEGRA INDOCABINET TBK,

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ABSTRACT

This research is a case study conducted in one of the property companies in Sidoarjo, East Java, namely PT Integra Indocabinet Tbk ., Based on secondary data, PT Integra Indocabinet has increased sales and profits from 2014 - 2018. Therefore, the owners want to expand their expansion by adding new factory facilities so they can get more optimal profits and can increase exports abroad. The research aims to provide assistance in the form of suggestions for decision making between feasible or not worthy of the investment carried out. Based on the calculation, obtained an NPV value of $195,510,594,699 \geq 0$ which means it is feasible to run, an IRR of $22\% > \text{hurdle rate } (10\%)$ which means it is feasible to run; Payback Period is $4 \text{ years } 3 \text{ months} > 5 \text{ years}$ which means it is feasible to be implemented; The Profitability Index is $1.98 > 0$, which means it's worth running. The results of the analysis show that using Capital Budgeting techniques can be seen that investment decisions for expansion are feasible.

Keywords: Capital Budgeting, Investment Decisions, NPV, IRR, PB, PI

1. INTRODUCTION

A. Background Research The

Purpose of investing is to obtain large profits with manageable risks and in hopes of optimizing the value of the company. Investment decisions affect the value of the company, and this shows that there are a number of investments that will get a surplus if the company is able to make the right investment decisions. According to (Triastuti, Ningsih, & Diba, 2018) The surplus obtained will contribute to cashflow, then accumulated on increasing the profit of the company, conversely if the investment decision does not affect the value of the company, it means that the company has a deficit for a number of investments that will reduce equity and ultimately will reduce the value of the company. In the company's business turnover, capital budget becomes an important tool in allocating resources within a company. This is inseparable from the role of a manager in making rational economic decisions so that the budget process can be made effective. Decisions taken can then have a significant impact on the company. Therefore, not a few decision makers escalate their commitment to a series of poor project performance (Scientific, Volume, & Agustina, 2011). According to (Van Horne and Wachowicz, 2005) capital budgeting is the process of identifying, analyzing, and selecting various projects whose returns (cash flows) are estimated to be received more than one hundred. Whereas according to Suadana (2011), capital budgeting is the minimum level of income that the capital owner implies. So from the point of view of companies that obtain funds, the level of income indicated is the cost of funds obtained by the company. The size of the capital of a company depends on the source of funds used by the company to finance investments, especially the source of long-term funds. There are various forms of investment including: the establishment of new businesses, expanding businesses, or expanding finance to rehabilitate machines that have decreased efficiency, rebuilding machinery (rebuilding), changing distribution channels from distribution through intermediaries to distribution through agents / branches owned by the company itself, conducting research to find a more efficient process, creating new products and improving management information systems.

Furniture manufacturer, PT Integra Indocabinet Tbk (WOOD) has prepared several expansion agendas this year so that its performance will increase and is known to be adding production facilities for manufacturing new products, such as wooden blinds or wooden window blinds to metal furniture with metal combinations. For this reason, WOOD has again built a new plant facility by utilizing land that has been purchased from the IPO results in 2017. PT Integra Indocabinet has a production capacity of around 10 containers per month or 1,650 cubic meters of wood per year, both wooden blinds and iron furniture targeting foreign markets namely the United States (US). For this reason WOOD is reportedly planning to

release *capital expenditure* Rp 200 billion in (capex) this year to support the expansion needs.

From the explanation above shows the importance of finance, the topic I will examine is about Capital Budgeting to measure the feasibility of expansion to be carried out by PT Integra Indocabinet, and I chose the following title "**ANALYSIS CAPITAL BUDGETING FEASIBILITY OF INVESTMENT PROJECTS IN PT INTEGRA INDOCABINET Tbk**"

2. PROBLEM FORMULATION

1. What is the application of the Capital Budgeting method in calculating the feasibility of an project investment of PT Integra Indocabinet?
2. How to assess the feasibility of an investment project of PT Integra Indocabinet through Payback analysis Period (PBP)?
3. How to assess the feasibility of PT Integra Indocabinet's investment project through Net analysis Present Value (NPV)?
4. How to assess the feasibility of the PT Integra Indocabinet investment project through the analysis of Profitability index (PI)?
5. How to assess the investment feasibility of PT Integra Indocabinet through the analysis of the Internal Rate of Return (IRR)?

3. OBJECTIVES OF RESEARCH

1. To analyze the application of the capital budgeting method in calculating the feasibility of the investment project carried out by PT Integra Indocabinet.
2. To assess the feasibility of investment projects carried out by PT Integra Indocabinet.

4. BENEFITS OF RESEARCH

1. For Authors
This research is expected to be a means to increase knowledge and insight about what techniques are used in conducting capital budgeting analysis and can apply the theories obtained during college.
2. For Universities
The results of this study are capable and can be used as a reference for writing and further researchers, especially in inventory case studies.
3. For Companies
Companies can find out whether this investment project is feasible or not.

5. E. RESEARCH METHODS

1. Approach

research carried out is descriptive research, namely by collecting, classifying, analyzing and interpreting data relating to the problems faced and comparing technical knowledge (primary data) with the actual conditions in the company to then draw conclusions .

2. Research Places

This research was conducted at the research address at PT Integra Indocabinet Sidoarjo Jl. Raya Betoro 678, Sedati, Sidoarjo, East Java.

3. Definition Of Operational Variables

Capital Budgeting Capital budgeting is the process of identifying, analyzing and selecting investment activities whose returns (cash flows) are expected to be more than one year.

4. Data Types And Sources

Type of data used in this study is qualitative data, in the form of financial report documents of PT. Integra Indocabinet. The data is secondary data, namely data obtained from the company in the form of financial statements of PT Integra Indocabinet.

6. RESULTS AND DISCUSSION

INITIAL INVESTMENT

PT Integra Indocabinet plans to build a factory *wooden blind* for the United States market. Besides increasing revenue, the construction of this factory, said Wang, is to increase the utilization of wood produced from the company's forests. A factory planned to be built in Sidoarjo and has a capacity of 6,500 square meters. And PT Integra Indocabinet has prepared around Rp 200,000,000,000 for the construction of this factory.

a. Cash Flow Report

One of the important things in the issue of investment policy is to make an estimate of the expenditure of money that will be received from the investment in the future. To evaluate various alternatives for budgeting capital goods / investments, companies must determine the appropriate cash flow, namely data regarding net cash flow from an investment.

**Cash Flow Statement
PT Integra Indocabinet Tbk
for the Year Ended December 2014-2018**

TAHUN	2014 (Dalam satuan Rupiah)	2015 (Dalam satuan Rupiah)	2016 (Dalam satuan Rupiah)	2017 (Dalam satuan Rupiah)	2018 (Dalam satuan Rupiah)
Arus Kas Dari Aktivitas Operasional					
Penerimaan Kas Dari Pelanggan	956.773.576.810	1.158.171.383.790	1.238.094.707.735	1.789.140.859.113	1.762.366.143.116
Pembayaran kas kepada Pemasok, direksi, karyawan, dan beban Operasional lain-lain	(886.162.863.406)	(1.076.278.614.083)	(1.312.603.447.919)	(1.555.960.332.893)	(1.939.774.513.020)
Kas yang diperoleh dari (digunakan untuk) operasional	70.610.713.404	81.892.769.707	74.508.740.184	233.180.526.220	(177.408.369.904)
Penghasilan keuangan	222.261.844	749.969.374	893.970.605	4.747.654.553	372.703.689
Beban Keuangan	(62.629.047.360)	(82.331.104.454)	(108.082.005.895)	(140.357.678.056)	(166.503.499.767)
Pembayaran Pajak	(8.291.031.939)	(9.877.880.616)	(22.814.825.939)	(64.586.558.811)	(88.236.564.069)
Penerimaan Pajak	1.030.186.236	1.405.185.446	416.312.095	912.769.958	1.647.511.021
Lain-lain Bersih	7.168.537.414	8.132.624.499	10.377.755.877	7.560.159.630	15.700.234.777
Kas bersih yang diperoleh dari (digunakan untuk) Aktivitas Operasional	8.111.619.599	28.436.044	193.717.533.441	41.456.873.494	414.427.984.259

(Source: Financial Statements of PT Integra Indocabinet Tbk: 2014-2015)

And for the next step is to take into account Depreciation, *payback period*, *Average rate of return (ARR)*, *Net Present Value at 10% discount rate*, *Profitability Index at 10% discount rate*, and finally the *Internal Rate of Return*.

b. Depreciation

The economic life of an investment is estimated at 5 years using the straight-line method and the

calculation details are as follows:

Table. Income before Depreciation

	2014	2015	2016	2017	2018
Profit Before depreciation	Rp 8.111.619.599	Rp 28.436.044	Rp 193.717.533.441	Rp 41.456.873.494	Rp 414.427.984.259

(Source: Author: 2019)

Depreciation = Initial Investment: Economic Age

Table. Depreciation With Straight-Line Method

AKHIR TAHUN KE	BIAYA PENYUSUTAN	AKUMULASI BIAYA PENYUSUTAN	NILAI BUKU
1	Rp 40.000.000.000	Rp 40.000.000.000	Rp 160.000.000.000
2	Rp 40.000.000.000	Rp 80.000.000.000	Rp 120.000.000.000
3	Rp 40.000.000.000	Rp 120.000.000.000	Rp 80.000.000.000
4	Rp 40.000.000.000	Rp 160.000.000.000	Rp 40.000.000.000
5	Rp 40.000.000.000	Rp 200.000.000.000	Rp -

(Source: Author: 2019)

Table. Cash In Flow

TAHUN	1 (Rp)	2 (Rp)	3 (Rp)	4 (Rp)	5 (Rp)
PROFIT BEFORE DEP.	8.111.619.599	28.436.044	193.717.533.441	41.456.873.494	414.427.984.259
LESS. DEP	(40.000.000.000)	(40.000.000.000)	(40.000.000.000)	(40.000.000.000)	(40.000.000.000)
PROFIT BEFORE TAX	(31.888.380.401)	(39.971.563.956)	153.717.533.441	1.456.873.494	374.427.984.259
TAX @15%	(4.783.257.060)	(5.995.734.593)	23.057.630.016	218.531.024	56.164.197.639
NET PROFIT	(27.105.123.341)	(33.975.829.363)	130.659.903.425	1.238.342.470	318.263.786.620
LESS. DEP	40.000.000.000	40.000.000.000	40.000.000.000	40.000.000.000	40.000.000.000
CASH INFLOW	12.894.876.659	6.024.170.637	170.659.903.425	41.238.342.470	358.263.786.620

(Source: Author : 2019)

2. Evaluation Method of Investment Worthiness

a. Payback The

Payback Period period shows how long the period of time required to return the investment value by dividing the total initial investment with the total proceeds per year. At this Investment the maximum proceeds taking into account its economic age is estimated to be 5 years. Furthermore, PBP calculation with the assumption that the proceeds are constant (annuity) per year, then the PBP can be calculated as follows:

Table. Payback for Period

YEARS	CF (Cash Flow)
0	Rp (200.000.000.000)
1	Rp 12.894.876.659
2	Rp 6.024.170.637

3	Rp 170.659.903.425
4	Rp 41.238.342.470
5	Rp 358.263.786.620

(source: Author: 2019)

$$\begin{aligned}
 PB &= 4 \text{ years} + \frac{\text{Rp } 10.421.049.279}{\text{Rp } 41.238.342.470} \\
 &= 4 \text{ years} + 0,25 \\
 &= 4,25 \text{ years} \quad (4 \text{ years, and } 3 \text{ months})
 \end{aligned}$$

Taking into account the PBP results mentioned above for 4.3 years while the maximum proceeds from this stone breaking unit are 5 years, then the rate of return of the investment value is faster than the maximum proceeds so that PT Integra Indocabinet Tbk's investment is feasible.

b. Net Present Value (NPV)

Net present value takes into account the present net value on the basis of the time value of future money to be valued at the present time. This will be obtained from the difference from the present value of proceeds with the present value of initial investment taking into account the economic age and a certain discount rate. Here's the calculation:

Table. Net Present Value

Tahun	CF	PVF 10%	PV
0	Rp (200.000.000.000)	1	Rp (200.000.000.000)
1	Rp 12.894.876.659	0,909	Rp 11.721.442.883
2	Rp 6.024.170.637	0,826	Rp 4.975.964.946
3	Rp 170.659.903.425	0,751	Rp 128.165.587.472
4	Rp 41.238.342.470	0,683	Rp 28.165.787.907
5	Rp 358.263.786.620	0,621	Rp 222.481.811.491

(source: Author: 2019)

$$\begin{aligned}
 NPV &= \frac{\sum CF}{(1+i)^n} - CI && (1) \\
 &= \text{Rp } 395.510.594.699 - \text{Rp } 200.000.000.000 \\
 &= \text{Rp } 195.510.594.699
 \end{aligned}$$

The results of the above table shows that investment plans can be run because the NPV value indicates a positive number that is equal to Rp 195 510 594 699, so that this investment financially feasible to run.

c. Profitability Index (PI)

By using the 10% discount rate above, then profitability index (PI), can be calculated by comparing the *PV of Cash Inflow* with *PV of initial Investment*. From the results of the NPV calculation above, the following results are obtained:

$$\begin{aligned}
 PI &= \frac{\text{Present Value Of Cash In Flow}}{\text{Present value of cash outflow}} && (2) \\
 &= \frac{\text{Rp } 395.510.594.699}{\text{Rp } 200.000.000.000} \\
 &= 1,98
 \end{aligned}$$

Results of calculation of *profitability index (PI)* obtained a value of 1,98, meaning greater than number 1, so this investment is feasible to run.

d. Internal Rate Of Return (IRR) The

internal rate of return calculates the interest rate that equals the present value of the proceeds. IRR is used as a benchmark for the level of the project's ability to produce proceeds to the same as the *initial investment* then compared to the level of *cost of capital*. To obtain this value, an interpolation approach is carried out by calculating a positive NPV with a negative NPV, so a certain discount factor will be obtained which results in an NPV value equal to 0, with the formula:

Table. Internal Rate Of Return

Tahun	CF	PVF 10%	PV	PVF8%	PV
0	(200.000.000.000)	1	(200.000.000.000)	1	(200.000.000.000)
1	12.894.876.659	0,909	11.721.442.883	0,926	11.940.655.786
2	6.024.170.637	0,826	4.975.964.946	0,857	5.162.714.236
3	170.659.903.425	0,751	128.165.587.472	0,794	135.503.963.319
4	41.238.342.470	0,683	28.165.787.907	0,735	30.310.181.715
5	358.263.786.620	0,621	222.481.811.491	0,681	243.977.638.688

(source: Author: 2019)

$$\begin{aligned}
 \text{IRR} &= \text{Lower Rate} + \frac{\text{Positive NPV}}{\text{Positive NPV} - \text{Negativ NPV}} + \text{Different In Discount Rate (3)} \\
 &= 8\% + \frac{226.895.153.745}{226.895.153.745 - 195.510.594.699} + 2 \\
 &= 8\% + 14 \\
 &= 22\%
 \end{aligned}$$

The IRR calculation results obtained at an IRR of 22%, more the amount of interest used for the *cost of capital from the initial investment is 10%* percent, so this investment is feasible to run.

7. CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the research that has been conducted, several conclusions can be taken as follows:

1. Based on the results of financial analysis obtained from the calculation of *Payback period* investment to be carried out by PT Integra Indocabinet Tbk, it is feasible to run because it shows PBP 4.3 year faster than the maximum period of 5 years.
2. Based on the results of a Net Present Value (NPV) positive, which is equal to 195,510,594,699, then it is stated that this investment is feasible to carry out
3. Based on the results of the study, the Profitability Index (PI) of 1.98 is greater than 1, then this investment is stated feasible to run
4. Based on the results of the study show an IRR of 22% greater than the value of cost of capital 10%, then it is stated that this investment is feasible to run.
5. By observing the results of these quantitative values as the basis for making decisions through a capital budgeting approach through financial analysis, this investment is financially "WORTH" to run.

Suggestion

After describing some of the conclusions mentioned above, it is necessary to put forward some suggestions relating to investment in fixed assets that can be taken into consideration in decision making in the future. The suggestions that can be put forward are as follows:

1. For Companies
 - a. Decisions regarding investment in fixed assets are decisions that greatly determine the success of the company, because decisions regarding investment are related to large funds and a relatively long time.

- b. Companies in investing their funds in an investment proposal need to analyze whether the investment proposal is really feasible or not to be implemented, because then the risk of losses to be suffered by the company will be smaller.
 - c. The results of the calculation of investment feasibility analysis indicate that this investment is feasible to be implemented.
2. For Further Researchers
- It is better for future researchers to conduct research related to the feasibility of investment proposals for fixed assets should pay attention to aspects that can affect the feasibility of the proposed investment, so the results obtained will be correct really valid, the proposed investment can provide maximum benefits and does not have a negative impact on the company that will make the proposed investment .

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