ISSN: 2338-8412 e-ISSN : 2716-4411

**Ekombis Review – Jurnal Ilmiah Ekonomi dan Bisnis**
Available online at : https://jurnal.unived.ac.id/index.php/er/index
**DOI:** https://doi.org/10.37676/ekombis.v13i2

# Business Feasibility Study Of Electronic Government System Application Development Project Using Capital Budgeting Method By PT Sangkuriang Internasional

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***How to Cite :***
Widadi, R,M. Sibarani, M. (2025). Business Feasibility Study Of Electronic Government System Application Development Project Using Capital Budgeting Method By PT Sangkuriang Internasional. EKOMBIS REVIEW: Jurnal Ilmiah Ekonomi Dan Bisnis, 13(2). DOI: https://doi.org/10.37676/ekombis.v13i2

**ARTICLE HISTORY**
*Received [30 December 2024]*
*Revised [20 February 2025]*
*Accepted [17 March 2025]*

***KEYWORDS***
Feasibility Study, Capital Budgeting, Information System Project.



## Abstract

Capital budgeting is an important part of a project, because it is a process for business evaluation that is useful for assessing the feasibility of a project. In previous projects, PT Sangkuriang Internasional did not calculate capital budgeting of the project and only looked at the possible profits based on the predicted cash flow. Capital budgeting will be used as a reference for companies or organizations to continue or not a project. The purpose of this study is to analyze the feasibility of the Electronic-Based Government System Application Development project from an economic perspective for the Sangkuriang Internasional company. This research method uses a quantitative descriptive method. Data will be taken from ongoing projects and some will be forecasted to complete incomplete data. The forecasting carried out will follow the advice given by the company's finance department. The results of the feasibility analysis show that the Electronic-Based Government System application development project is feasible to work on. From the results of the economic feasibility analysis, the value obtained was NPV = Rp 920.868.596,90, PI = 2,20, IRR = 26,497% per month (317,968% in 1 project), PP = 5.76 months, and RoI = 14.09% with the Weighted Average Cost of Capital used is 10%. So based on the results of economic feasibility shows that the Electronic-Based Government System application development project is still feasible to be continued by the company PT Sangkuriang Internasional.

## INTRODUCTION

Technology is rapidly developing in Indonesia. In the creation and management of population data, permits, and other processes carried out in communities, governments, and other organizations, there has been a shift towards using online applications. During the Covid-19 pandemic, many activities that could previously be done in person were hindered, leading to

a transition to online data management and permitting activities. To address this, the government began developing applications aimed at helping to process data and permits quickly, structured, semi-automatically, and transparently. Applications such as Info BMKG, Digital Korlantas, Mobile JKN, JMO, BPOM Mobile, Lapor!, Signal, M Paspor, and others have been very helpful to the community. The Electronic-Based Government System (SPBE) is the implementation of governance that utilizes information and communication technology to provide services to SPBE users, including the public, government, organizations, and others. The development of SPBE is driven by advancements in information and communication technology, which offer opportunities for governance to provide services to the public, business actors, civil servants, government agencies, and various others.

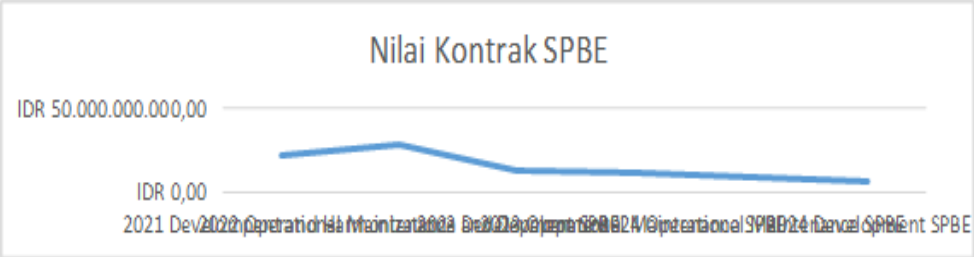
This application aims to implement Presidential Regulation No. 95 of 2018 (Peraturan Presiden No. 95 Tahun 2018) regarding the Electronic-Based Government System, which aims to achieve clean, transparent, effective, accountable governance, an integrated electronic-based government system, and reliable and quality public services. The SPBE web application provides various types of government services. There are three types of services in SPBE: external service applications, internal service applications, and other service applications. PT Sangkuriang Internasional is an information technology company established in 2010. The company undertakes projects in Big Data Intelligence, Data Centers, information systems, IT Planning, IT Procurement, and has worked with various clients, including government, public sector, private sector, and nonprofit organizations. For the SPBE project, PT Sangkuriang Internasional was selected through a project tender and was requested by the government to maintain and develop the SPBE Information System. PT Sangkuriang was chosen for this project due to its successful completion of previous SPBE projects, other significant government projects, and passing the testing and evaluation conducted by the Ministry of Communication and Information Technology during the tender process.

Determining the feasibility of a project in an IT company is crucial because IT projects often require substantial funding. Additionally, there are unexpected costs that may burden the company, and client payments are typically made in stages over a certain period until the payment is completed. Moreover, these projects carry significant risks that can be detrimental to the company if the project fails or if there are errors in budget calculations. Project failures can result in significant losses for the company (as the company will not receive payment if the project fails or is canceled) and loss of client trust. If clients feel significantly disadvantaged, they may pursue legal action. Therefore, thorough preparation is essential to avoid project failures. In previous projects, the company tended not to calculate the project's profitability comprehensively before starting the project, only forecasting potential cash flows. This has led to projects causing losses due to unexpected costs arising from contract issues related to application development that did not go as planned and unexpected changes that were difficult to resolve. A case that occurred in company was the patent application development project at the Directorate General of Intellectual Property Rights (Ditjen HAKI) of the Ministry of Law and Human Rights (Kemenkumham), which was supposed to be completed in 3 months. However, due to client-side issues, the project was delayed by 1 month, leaving only 2 months for completion. The existing contract was not amended by the client, resulting in the company incurring higher costs to hire more experts to complete the project within the remaining 2 months.

After the project was completed, the Audit Board of Indonesia (BPK) stated that the work was problematic because the contract stipulated a 3-month period, and BPK demanded a significant refund. This caused losses for the company as it had spent substantial funds to meet the required timeline, but the 2-month completion was deemed problematic by the BPK audit. Additionally, varying contract values also posed issues. The contracts received by the company had significant values, but these values differed each period and project type, even for the same or continued projects (operation maintenance or development). For example, the SPBE

development contract value in 2023 was higher than the development contract value in 2024. The contract value in 2022 was the highest, amounting to IDR 27,978,521,250 for all operational maintenance and SPBE application development. However, the contract values in 2023 and 2024 were smaller compared to the previous ones. This raised questions within the company regarding the profitability of continuing the SPBE project.

**Figure 1 SPBE Contract Value**




Therefore, this research is conducted to determine the profitability and assess the feasibility of the current project. It aims to serve as a reference for future projects, ensuring that the company does not incur losses and can avoid unprofitable projects. In the design and development of an information system, financial analysis is a crucial part, as it serves as a reference for the organization to determine whether the project is profitable and feasible. Errors in financial analysis can lead to company losses. Financial analysis errors can occur due to mistakes in projecting revenue, investment costs, and operational costs. Besides financial analysis errors, unexpected costs can also result in losses for the company.

The purpose of this research is to analyze the financial data of PT Sangkuriang Internasional's SPBE project to determine whether it is feasible and profitable to continue the web-based SPBE application system maintenance project from an economic perspective using the capital budgeting method. The results of this research will be used as a standard for calculating the feasibility of future projects and are expected to help avoid losses. The data to be analyzed in this research is operational maintenance data from January 2024 to December 2024, as this data is suitable and can be analyzed. The data includes a contract value of IDR 8,108,108,108.00 and an initial investment of IDR 1,550,794,077.13, which was made over the first five months, from January 2024 to May 2024.

## LITERATURE REVIEW

Capital Budgeting is a process for business evaluation that is useful for assessing whether a project or a major company plan is feasible. In Capital Budgeting, there are several methods such as NPV, IRR, PI, ARR, PP, and RoI. The results obtained from these methods can be used to determine whether a project is feasible to undertake. In the research conducted by Ningsih, K. P., & Adhi, S. N. (2021) in determining the information system project carried out at RSUD Panembahan Senopati Bantul hospital, the economic feasibility was tested using the NPV, RoI, and PP methods with result PP = 0.97 year, RoI = 418%, and NPV = 709.441.814, Thus, it can be concluded that the investment is feasible. In the research conducted by Fikri, A. M. & Fachrureza, F d (2020) on the information technology investment project at Jumbo Swalayan Manado, the NPV, IRR, PI, and PP methods were used to obtain economic feasibility and the result of this research was NPV = IDR 5.390.622.103 > 0, IRR = 361,9% dan PI = 15,12821938 > 1 and PP = 3 months 9 days. In the research conducted by Ni Luh Gede Wahyu Pradnyawati (2021) at PT Hatten Bali to evaluate investment decisions on the addition of fixed assets, the Capital Budgeting method was used, and the result was IRR = 137,72% > 7,7%, PI = 15,62 > 1, NPV = IDR 5.037.099.810,00 > 0, PP = 1 year 4 days, ARR = 580% > 7,7%. Thus, based on several previous

studies, it can be concluded that capital budgeting can be used to assess the feasibility of a project, especially in information system projects.

## METHODS

In this research, a quantitative descriptive approach will be used for financial data analysis based on data obtained from pt sangkuriang international regarding the state of the project (capital and project finance). Quantitative descriptive research analysis is used to analyze data by describing or illustrating the collected data as it is, without intending to make conclusions that apply generally or generalizations. Quantitative descriptive research uses a systematic approach to collect and analyze numerical data to describe and summarize statistical numerical data. The purpose of the quantitative descriptive method is to provide a clear and in-depth description of the characteristics of the data being studied without making comparisons or linking it to other variables (sugiono). The data taken is the financial data of the ongoing project (OM SPBE 2024), with a project duration of 12 months (from January to December) with a contract value of IDR 8,108,108,108.00 with an initial investment made from January to May amounting to IDR 1,550,794,077.13. The data obtained from PT Sangkuriang Internasional is incomplete, so forecasting is needed to complete the data and obtain a complete cash flow.

Several forecasting techniques will be used to complete the cash flow, namely Qualitative judgmental forecasting will be used for salary expenses (based on the needs of project experts), vendor expenses (based on the habits of the vendor in requesting payments often made in other or previous projects), and expenses for meetings (comdev) that follow the schedule set between the client and the company Qualitative analog forecasting will be used for overhead and operational expenses and will follow the data from the previous month that the company has incurred in the project. Qualitative milestone-based forecasting will be used for forecasting payment terms data and pph 23 expense data, the amount and timing of which are based on the payment terms and project milestone. The results of the forecasting are as follows:

**Table 1cost Of Sales (Vendor Expense And Salary Expense)**

| | Vendor1 | Vendor 2 | Vendor 3 | Vendor 4 | Vendor 5 | Vendor 6 | Salary |
|---|---|---|---|---|---|---|---|
| **Mar** | | | | | | | IDR 151.382.710,40 |
| **Apr** | | | | | | | IDR 151.382.710,40 |
| **May** | IDR 45.900.000,00 | IDR 33.300.000,00 | | IDR 54.000.000,00 | IDR 17.500.000,00 | | IDR 151.382.710,40 |
| **Jun** | | IDR 56.700.000,00 | IDR 65.326.633,16 | IDR 160.000.000,00 | IDR 17.500.000,00 | | IDR 130.129.425,40 |
| **Jul** | | | | | | | IDR 130.129.425,40 |
| **Aug** | IDR 74.100.000,00 | IDR 60.000.000,00 | IDR 70.673.366,84 | IDR 160.000.000,00 | IDR 52.500.000,00 | | IDR 130.129.425,40 |
| **Sep** | IDR 120.000. | | IDR 136.000.00 | | | | IDR 130.129.42 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 000,00 | | 0,00 | | | | 5,40 |
| Oct | IDR 120.000.000,00 | IDR 80.000.000,00 | IDR 136.000.000,00 | IDR 160.000.000,00 | IDR 50.000.000,00 | | IDR 130.129.425,40 |
| Nov | IDR 120.000.000,00 | IDR 80.000.000,00 | IDR 136.000.000,00 | | | | IDR 130.129.425,40 |
| Dec | IDR 120.000.000,00 | IDR 90.000.000,00 | IDR 136.000.000,00 | IDR 116.000.000,00 | IDR 62.500.000,00 | IDR 250.000.000,00 | IDR 111.669.344,40 |
| JLH | IDR 600.000.000,00 | IDR 400.000.000,00 | IDR 680.000.000,00 | IDR 650.000.000,00 | IDR 200.000.000,00 | IDR 250.000.000,00 | IDR 1.346.594.028,00 |

**Table 2 Overhead Expense And Operation Expense**

| | OVERHEAD | OP. EXP |
|---|---|---|
| **Jan** | IDR 81.081.081,08 | IDR 87.837.837,84 |
| **Feb** | IDR 81.081.081,08 | IDR 87.837.837,84 |
| **Mar** | IDR 81.081.081,08 | IDR 87.837.837,84 |
| **Apr** | IDR 81.081.081,08 | IDR 87.837.837,84 |
| **May** | IDR 81.081.081,08 | IDR 87.837.837,84 |
| **Jun** | IDR 81.081.081,08 | IDR 87.837.837,84 |
| **Jul** | IDR 81.081.081,08 | IDR 87.837.837,84 |
| **Aug** | IDR 81.081.081,08 | IDR 87.837.837,84 |
| **Sep** | IDR 81.081.081,08 | IDR 87.837.837,84 |
| **Oct** | IDR 81.081.081,08 | IDR 87.837.837,84 |
| **Nov** | IDR 81.081.081,08 | IDR 87.837.837,84 |
| **Dec** | IDR 81.081.081,08 | IDR 87.837.837,84 |
| **Total** | IDR 972.972.972,96 | IDR 1.054.054.054,04 |

**Table 3 Income and PPh23**

| | Income | PPh23 |
|---|---|---|
| **Apr** | IDR 810.810.810,80 | IDR 16.216.216,22 |
| **Jun** | IDR 1.621.621.621,60 | IDR 32.432.432,43 |
| **Jul** | IDR 1.621.621.621,60 | IDR 32.432.432,43 |
| **Sep** | IDR 1.621.621.621,60 | IDR 32.432.432,43 |
| **Nov** | IDR 1.621.621.621,60 | IDR 32.432.432,43 |
| **Dec** | IDR 810.810.810,80 | IDR 16.216.216,22 |
| **Total** | IDR 8.108.108.108,00 | IDR 162.162.162,16 |

**Table 4 Comdev Expense**

| | Comdev |
|---|---|
| **Apr** | IDR 101.351.351,35 |
| **Jul** | IDR 202.702.702,70 |
| **Sep** | IDR 202.702.702,70 |
| **Nov** | IDR 202.702.702,70 |
| **Dec** | IDR 101.351.351,35 |
| **Total** | IDR 810.810.810,80 |

**Table 5 Cashflow Per Month**

| | |
|---|---|
| **Jan** | IDR (168.918.918,92) |
| **Feb** | IDR (168.918.918,92) |
| **Mar** | IDR (320.301.629,32) |
| **Apr** | IDR 372.941.613,92 |
| **May** | IDR (471.001.629,32) |
| **Jun** | IDR 990.614.211,69 |
| **Jul** | IDR 1.087.438.142,15 |
| **Aug** | IDR (716.321.711,16) |
| **Sep** | IDR 831.438.142,15 |
| **Oct** | IDR (845.048.344,32) |
| **Nov** | IDR 751.438.142,15 |
| **Dec** | IDR (361.845.020,08) |

The project assessment will be based on the feasibility aspects of the project using Capital Budgeting methods, which include the analysis of Net Present Value (NPV), Internal Rate of Return (IRR), Payback Period (PP), Profitability Index (PI), and Return on Investment (ROI). The WACC recommended by the company per project is 10%, Since the cash flow is monthly, the WACC per project will be divided by the project duration, which in this case is 12 months. The rate will be tested up to 40% to determine feasibility in a pessimistic scenario.

## RESULTS AND DISCUSSION

### Net Present Value

NPV is a method that focuses on the time value of money. NPV can be calculated by subtracting the initial investment cost from the sum of the present value of cash flows over each year or month, discounted at the appropriate interest rate. An NPV is considered feasible if NPV > 0 or NPV = 0, and not feasible if NPV < 0. (Stephen A. Ross et al.).

$$NPV = \sum_{t=0}^{n} \frac{CF_t}{(1+r)^t} - Initial\ Investment$$

- $CF_t$: Net cash inflow - outflow in one period.
- r: Discount rate or return
- t: Number of time periods
- Initial Investment: Initial investment
- n: Number of cash flows

The WACC used as the rate for this project is the rate for one project (12 months), so it must be converted to a monthly rate. The calculation is as follows:

$$\text{NPV} = -168.918.918{,}92 + \frac{-168{,}918{,}918.92}{(1 + \text{rate})^1} + \frac{-320{,}301{,}629.32}{(1 + \text{rate})^2} + \frac{372{,}941{,}613.92}{(1 + \text{rate})^3}$$

$$+ \frac{-471{,}001{,}629.32}{(1 + \text{rate})^4} + \frac{990{,}614{,}211.69}{(1 + \text{IRR})^5} + \frac{1{,}087{,}438{,}142.15}{(1 + \text{rate})^6} + \frac{-716{,}321{,}711.16}{(1 + \text{rate})^7}$$

$$+ \frac{831{,}438{,}142.15}{(1 + \text{rate})^8} + \frac{-845{,}048{,}344.32}{(1 + \text{rate})^9} + \frac{751{,}438{,}142.15}{(1 + \text{rate})^{10}} + \frac{-361{,}845{,}020.08}{(1 + \text{rate})^{11}}$$

**Table 6. All Net Present Value Result**

| Rate (1 year) | Per month (rate / 12 month) | NPV |
|---|---|---|
| 10% | 0,83333% | IDR 920.868.596,90 |
| 15% | 1,25000% | IDR 891.710.542,45 |
| 20% | 1,66667% | IDR 863.301.357,80 |
| 25% | 2,08333% | IDR 835.621.001,75 |
| 30% | 2,50000% | IDR 808.649.943,93 |
| 35% | 2,91667% | IDR 782.369.156,50 |
| 40% | 3,00000% | IDR 756.760.105,56 |

In the test using a WACC of 10% with a value of 0.833% per month (10% divided by 12 months), the NPV result was IDR 920,868,596.90. This result is greater than 0, so it can be concluded that the investment is feasible based on the NPV method. An NPV of IDR 920,868,596.90 indicates that the project will provide significant net profit and substantial returns from the initial capital invested. In the NPV test conducted at a 40% rate, the company still achieved a profit of IDR 756,760,105.56. This indicates that the project can still provide good returns even under high-risk assumptions.

**Internal Rate of Return**

Internal rate of return / Incremental rate of return (IRR) is a metric used in financial analysis to estimate the profitability of a project or investment (Stephen A. Ross et al.). IRR is the discount rate that makes the net present value (NPV) of all cash flows equal to zero in discounted cash flow analysis (the interest rate that makes the value equal to 0). The IRR calculation formula relies on the same formula as NPV. The higher the IRR value of an investment or project, the more attractive it becomes because this IRR value represents the profit obtained from the cash flows of an investment or project, which is the intrinsic value of the internal project and does not depend on other variables besides the project's cash flow. The IRR value will be compared with the project's WACC value. If the IRR is greater than the monthly WACC expected by the company, then the project is considered feasible.

$$0 = NPV = \sum_{t=1}^{T} \frac{CF_t}{(1 + IRR)^t} - CF_0$$

- $CF_t$: Net cash inflow at period t
- $CF_0$: Total initial investment cost
- IRR: Internal rate of return
- t: Number of time periods

The calculation is as follows:

$$0 = -168.918.918{,}92 + \frac{-168{,}918{,}918.92}{(1 + IRR)^1} + \frac{-320{,}301{,}629.32}{(1 + IRR)^2} + \frac{372{,}941{,}613.92}{(1 + IRR)^3} + \frac{-471{,}001{,}629.32}{(1 + IRR)^4}$$
$$+ \frac{990{,}614{,}211.69}{(1 + IRR)^5} + \frac{1{,}087{,}438{,}142.15}{(1 + IRR)^6} + \frac{-716{,}321{,}711.16}{(1 + IRR)^7} + \frac{831{,}438{,}142.15}{(1 + IRR)^8}$$
$$+ \frac{-845{,}048{,}344.32}{(1 + IRR)^9} + \frac{751{,}438{,}142.15}{(1 + IRR)^{10}} + \frac{-361{,}845{,}020.08}{(1 + IRR)^{11}}$$

IRR = 26,4973245048294% per month or 317,9679% in 1 project / 1 year.

The return rate achieved over 12 months is 26.497% per month or 317.9679% for the entire project. This result is obtained by calculating the IRR over 12 months. The IRR value is greater than the company's recommended WACC of 10% per project, which means the project's internal rate of return exceeds the capital cost used to fund the project. The IRR results for the SPBE project show significant profit potential, and the high IRR value concludes that this project is highly profitable. Therefore, it can be concluded that the investment is feasible based on the IRR method.

**Payback Period**

PP is a quantitative test used to calculate the time required to recover the investment costs incurred to run a project. The PP calculation for a project is considered feasible if the payback period is shorter than the investment lifespan, and not feasible if the payback period is longer than the investment lifespan. (Stephen A. Ross et al.).

$$PP = Number\ of\ Full\ Time + \frac{Remaining\ Investment}{Cash\ Flow\ in\ the\ following\ Time}$$

- Number of Full Time : The period in which the total accumulated net cash flow is still less than the initial investment or the last time the cumulative cash flow is negative.
- Remaining Investment : The difference between the initial investment and the accumulated cash flow at the end of the last period that has not fully paid off theinvestment.
- Cash Flow In The Following Time : The net cash flow at the time when the Remaining investment is returned.

The period in which the total accumulated net cash flow is still less than the initial investment is in the 5th month, Remaining Investment is IDR 756.199.482,55 and Cash Flow In the Following Time is IDR 990.614.211,69. The calculation is as follows:

$$PP = 5 + \frac{IDR\ 756.199.482,55}{IDR\ 990.614.211,69} = 5,76\ month$$

The return on this investment will be achieved in 5 months and 22.5 days, or by the 6th month. After the 6th month, the project will generate net profit until the 12th month, when the project is completed. Therefore, it can be concluded that the project is feasible based on the Payback Period (PP) method, as it can recover the initial investment, minimizing liquidity risk, and generate profit after 5.76 months.

**Profitability Index**

Profitability Index is a ratio that measures an investment or project compared to the initial capital expenditure. In making investment or project decisions, PI can help understand the present value of expected cash flows from an investment or project compared to the initial investment amount. (Stephen A. Ross et al.). A project is feasible if the PI > 1, and not feasible if the PI > 1.

$$Profitability\ Index = \frac{PV\ of\ future\ Cash\ Flow}{Initial\ Investment}$$

The initial investment made from January to May amounted to IDR 1,550,794,077.13. However, in April, there was revenue received amounting to IDR 810,810,810.80 with a PPh 23 tax of IDR 16,216,216.22, resulting in a net initial investment cost of IDR 756,199,482.55. The PV of the future cash flow is calculated from June to December (PV on month 5 to month 11) for each rate. The calculation is as follows:

$$PI = \frac{PV\ on\ month\ 5\ to\ month\ 11}{Rp\ 756.199.482{,}55}$$

**Table 7 All Profitability Index Result**

| Rate (1 project) | Per month | *PV* on month 5 to month 11 | PI |
|---|---|---|---|
| 10% | 0,83333% | IDR 1.664.191.627,32 | 2,20 |
| 15% | 1,25000% | IDR 1.628.775.425,27 | 2,15 |
| 20% | 1,66667% | IDR 1.594.224.276,67 | 2,11 |
| 25% | 2,08333% | IDR 1.560.515.343,06 | 2,06 |
| 30% | 2,50000% | IDR 1.527.626.376,83 | 2,02 |
| 35% | 2,91667% | IDR 1.495.535.710,38 | 1,98 |
| 40% | 3,00000% | IDR 1.464.222.244,93 | 1,94 |

In the test using the company's recommended WACC (10%), the PV value from June to December obtained is IDR 1,664,191,627.32. The PI value is obtained by dividing the PV value from June to December by the net initial investment cost, resulting in PI = 2.20. A PI value greater than 1 indicates that the present value of future cash flows (PV of cash flows) exceeds the total initial investment. This suggests that the project is expected to provide returns greater than its initial cost. Therefore, it can be concluded that the project is profitable and feasible to continue because the PI (2.20) obtained using the company's recommended WACC (10%) is greater than 1, meaning each unit of capital invested in this project will generate returns greater than the invested capital. In the test conducted at a 40% rate, the PI value is still at 1.97, which is above 1, indicating that this project has significant risk resilience. This can occur due to strong cash flows or good growth potential in the future.

**Return on Investment**

The Return on Investment (RoI) method will be used to measure the percentage of profit generated by the project compared to the costs incurred. The feasibility assessment of ROI is considered feasible if RoI > 0 and not feasible if RoI < 0. (Tim Koller et al.).

$$Return\ on\ Investment = \frac{(Income - Investment)}{Investment} \times 100\%$$

The project contract value is IDR 8,108,108,108.00, the tax amount is IDR 162,162,162.16, and the total investment cost that the company must incur is IDR 6,964,431,865.80. The calculation is as follows:

$$Net\ Income = 8.108.108.108{,}00 - \text{IDR } 162.162.162{,}16 = \text{IDR } 7.945.945.945{,}84$$

$$Return\ on\ Investment = \frac{7.945.945.945{,}84 - 6.964.431.865{,}80}{6.964.431.865{,}80} \times 100\% = 14{,}09\%$$

The RoI calculation resulted in 14.09%. This result is greater than 0, indicating that the investment is profitable and feasible. Additionally, this result is higher than the company's expected minimum profit of 10%.

## CONCLUSION

Conclusions Based on capital budgeting calculations and the analysis conducted, the author draws the following conclusions:

1. The "Electronic-Based Government System Application Development (SPBE)" project shows good potential with a WACC of 10% and low risk.
2. A positive NPV indicates that this project can provide significant profits, while a high IRR indicates that the project is profitable.
3. A quick Payback Period and a Profitability Index greater than 1 confirm that this project is efficient in returning capital and providing attractive investment returns.
4. The calculation results from net present value and profitability index indicate that if the Weighted Average Cost of Capital increases to 40%, the company can still obtain a positive NPV of IDR 760,196,751.26 and a PI greater than 1, which is 1.94. This means that the project can still provide profit even in a more pessimistic scenario.
5. Overall, this project is feasible to continue and can contribute positively to the company's growth.

## SUGGESTION

Based on the researcher's direct experience during this study, several limitations were encountered. The researcher's unable to obtain data on previous projects and the SPBE project data for the following year, which results in the researcher being unable to compare the results of the previous project with the current one. The WACC in this research is based on the company's recommendation, so there is a possibility that the WACC is not entirely accurate and needs to be recalculated for more precision.

The findings of this research are specific to the Electronic-Based Government System Application Development Project by PT Sangkuriang Internasional and may not be directly applicable to others. Future research can be conducted to software or hardware development projects that have higher risks than operational maintenance projects, comparing the values of NPV, IRR, PI, PP, and RoI in previous projects with higher contract values, and determining a more accurate Weighted Average Cost of Capital for development and operational maintenance software projects.

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