



## Investment Feasibility Study on PT Bank Central Asia TBK (BCA)

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### ABSTRACT

This study examines the financial feasibility of PT Bank Central Asia Tbk (BCA)'s digital channel expansion plan using the capital budgeting method. This study uses a quantitative method with a descriptive approach. The object of the study is PT Bank Central Asia Tbk (BCA). The data source is BCA's Audited Consolidated Financial Statements. The analysis period is 3 years (2023–2025). The data analysis techniques used are NPV, IRR, and Payback Period. The results of the three-year analysis show a positive NPV of IDR 154.74 trillion, an IRR of approximately 218.69%, which far exceeds the WACC of 2.53%, and a Payback Period of approximately 0.43 years ( $\pm 5$  months). All three indicators consistently confirm that the project is declared highly financially feasible

## INTRODUCTION

Amidst globalization and rapid technological developments, investment has become a crucial instrument for driving economic growth and increasing company value. Investment decisions must be based on rational and structured analysis to support effective financial governance (Ira & Setiawan, 2023). Mistakes in investment decisions can directly impact a company's cash flow, profitability, and even long-term business sustainability (Nugroho & Margana, 2024).

The complexity of global business demands that companies be more selective and systematic in determining investment projects, using objective, measurable, and data-driven analysis methods (Hiswandi et al., 2023). In capital budgeting practice, the NPV, IRR, and Payback Period methods are the three most widely used and complementary methods (Margana & Syaefulloh, 2024). Theoretically, capital budgeting methods use operational cash flow as the basis for calculations, rather than net income, because cash flow reflects the actual cash flow from business activities (Brigham & Houston, 2019; Gitman & Zutter, 2015).

PT Bank Central Asia Tbk (BCA) is one of the largest private banks in Indonesia, known for its high profitability and adaptability to digital developments. BCA has consistently allocated a substantial capital expenditure of IDR 8.7 trillion in 2023 and approximately IDR 8 trillion in 2024 to strengthen its digital infrastructure (IDNFinancials, 2023; Kontan, 2026). This study aims to analyze the feasibility of investing in BCA's digital channel expansion. Rohman et al. (2023) demonstrated that a capital budgeting approach based on official data is effective for corporate-scale technology transformation projects.

## LITERATURE REVIEW

### *Investment and Feasibility Studies in the Banking Industry*

Kasmir (2018) emphasized that investment feasibility studies aim to minimize the risk of future losses by systematically analyzing profit potential, risk profiles, and cash flow projections. Financial aspects remain a key pillar of decision-making (Husnan & Pudjiastuti, 2015). In the context of digitalization, investment in banking technology is closely linked to increased fee-based income and reduced operational costs (Hendra et al., 2024). Wardana et al. (2021) demonstrated the flexibility of capital budgeting methods across business sectors.

### *Net Present Value (NPV)*

NPV is the difference between the present value of cash inflows and the initial investment, integrating the concept of the time value of money. Brigham and Houston (2019) stated that a project is feasible if  $NPV > 0$ . The formula:  $NPV = \sum [CF_t / (1+r)^t] - I_0$ , where  $CF_t$  is the operational cash flow for period  $t$ ,  $r$  is the WACC, and  $I_0$  is the initial investment. Ahmad et al. (2025) confirmed a positive NPV as a key indicator of investment feasibility.

### ***Internal Rate of Return (IRR)***

IRR is the discount rate that produces  $NPV = 0$ . Gitman and Zutter (2015) determined that an investment is acceptable if the IRR exceeds the WACC. IRR is ideally combined with NPV because the two complement each other (Brigham & Houston, 2019).

### ***Payback Period (PP)***

The Payback Period measures the duration of initial capital recovery through accumulated cash flows. Husnan and Pudjiastuti (2015) stated that the shorter the payback period, the lower the liquidity risk. This method does not consider the time value of money, making it more appropriate as an initial screening tool (Ira & Setiawan, 2023; Ridwan et al., 2022).

### ***Weighted Average Cost of Capital (WACC)***

WACC is the weighted average cost of all funding sources used as a hurdle rate in capital budgeting. Its use is more methodologically appropriate than the benchmark interest rate because it reflects the actual cost of all company capital (Brigham & Houston, 2019). The cost of equity is calculated using the CAPM:  $K_e = R_f + \beta \times ERP$  (Damodaran, 2024).

## **METHODOLOGY**

This research employs a quantitative method with a descriptive approach. The object of the research is PT Bank Central Asia Tbk (BCA). The data source is BCA's Audited Consolidated Financial Statements. The analysis period is 3 years (2023–2025). The data analysis techniques use NPV, IRR, and Payback Period with the following assumptions.

1. The initial investment ( $I_0$ ) is set at IDR 25 trillion, referring to the realization of BCA's information technology capex, which is consistently in the range of IDR 8–8.7 trillion per year (IDNFinancials, 2023; Kontan, 2026), so that IDR 25 trillion represents the accumulation of BCA's digital investment over three years as an analysis scenario.
2. The cash flow used is net cash flow from operating activities (operating cash flow), sourced directly from BCA's Audited Consolidated Cash Flow Statement.
3. The discount rate is BCA's WACC of 2.53%, calculated based on BCA's audited financial statement data as of December 31, 2024. The 2024 WACC is used as the best publicly available proxy for the cost of capital, following the ex-post approach common in secondary data-based feasibility studies (Brigham & Houston, 2019).

## **RESULT**

Based on the Audited Consolidated Cash Flow Report of PT Bank Central Asia Tbk published through the Indonesia Stock Exchange, the following net cash flow data from operating activities was obtained:

Table 1. BCA's Operational Cash Flow

Year	Net Cash from Operating Activities (Rp Billion)	Cash Flow / CF (Rp Trillion)
2023	58,063,775	58.06
2024	53,820,229	53.82
2025	77,508,785	77.51

Source: [www.bca.co.id](http://www.bca.co.id)**Net Present Value (NPV)**Calculate the Discount Factor (DF) using  $r = WACC = 2.53\%$ .

Table 2. Net Present Value

Year	t	Formula	Discount Factor (DF)
2023	1	$1 \div (1+0.0253)^1 = 1 \div 1.0253$	0.9753
2024	2	$1 \div (1+0.0253)^2 = 1 \div 1.0514$	0.9513
2025	3	$1 \div (1+0.0253)^3 = 1 \div 1.0780$	0.9278

Source: Processed data (2026)

**Calculating Present Value (PV)**

Table 3. Present Value

Year	CF (Rp T)	DF	PV = CF × DF (Rp T)
2023	58.06	0.9753	56.63
2024	53.82	0.9513	51.20
2025	77.51	0.9278	71.91
Total PV			179.74

Source: Processed data (2026)

**Calculating NPV**

$$NPV = \text{Total PV} - I_0 = 179.74 - 25.00 = \text{Rp}154.74 \text{ trillion}$$

Thus,  $NPV = \text{Rp}154.74 \text{ trillion} > 0$ . The project is highly financially viable. With three years of actual operational cash flow data and a WACC of 2.53% as a discount rate, the project generates a net added value of Rp154.74 trillion above the initial investment.

**Internal Rate of Return (IRR) Calculation**

Since the NPV at  $r = WACC = 2.53\%$  is very large positive (Rp154.74 T), the IRR is sought through interpolation at a much higher discount rate.

NPV at a discount rate of 218%:

Table 4. Present Value table discount rate 218%

Year	CF (Rp T)	DF 218%	PV (Rp T)
2023	58.06	0.3145	18.26
2024	53.82	0.0989	5.32
2025	77.51	0.0311	2.41
Total PV			25.99

Source: Processed data (2026)

NPV at  $r = 218\%$ :  $25.99 - 25.00 = +Rp0.99$  trillion (positive)  
 NPV at a discount rate of 219%:

Table 5. Present Value table discount rate 219%

Year	CF (Rp T)	DF 219%	PV (Rp T)
2023	58.06	0.3135	18.20
2024	53.82	0.0983	5.29
2025	77.51	0.0308	2.39
Total PV			25.88

Source: Processed data (2026)

NPV at  $r = 219\%$ :  $25.88 - 25.00 = -Rp0.12$  Trillion (negative because Total PV is below  $I_0$ )

Note: The NPV values in the table are rounded. The crossover occurs at IRR = 218.69% based on precision interpolation.

IRR Interpolation:

$$IRR = 218\% + [0.99 / (0.99 + 0.12)] \times 1\% = 218\% + [0.99/1.11] \times 1\% \approx 218.69\%$$

Thus, the IRR  $\approx 218.69\%$  far exceeds the WACC of 2.53% (hurdle rate). The difference between IRR - WACC  $\approx 216$  percentage points indicates the company's enormous value creation potential.

***Payback Period (PP) Calculation***

Table 6. Payback Period Calculation Table

Year	CF (Rp T)	Accumulated CF (Rp T)	Information
2023 (t=1)	58.06	58.06	Exceeding $I_0 = Rp25$ T in the first year
2024 (t=2)	53.82	111.88	Accumulation continues
2025 (t=3)	77.51	189.39	Accumulation continues

Source: Processed data (2026)

$$PP = I_0 \div CF \text{ First Year} = 25.00 \div 58.06 = 0.43 \text{ Years } (\pm 5 \text{ Months } 1 \text{ Week})$$

$$PP = 0.43 \text{ Years}$$

Thus, the initial investment of IDR 25 trillion can be recovered in approximately 5 months from BCA's operating cash flow in the first year of the analysis. Liquidity risk is very low.

### *Summary of Analysis Results*

Table 7. Summary of Analysis Results

Method	Calculation Results	Eligibility Criteria	Decision
Net Present Value (NPV)	Rp154.74 trillion	NPV > 0	WORTHY ✓
Internal Rate of Return (IRR)	±218.69%	IRR > WACC 2.53%	WORTHY ✓
Payback Period (PP)	0.43 Years (±5 Months)	PP < 3 Years	WORTHY ✓

Source: Processed data (2026)

All three capital budgeting methods consistently yielded the same conclusion: BCA's digital channel expansion project was declared VERY VALID for implementation.

## **DISCUSSION**

### *Net Present Value (NPV) Analysis*

The NPV of IDR 154.74 trillion (NPV > 0) firmly confirms the project's financial feasibility. This value means the project not only returned the entire initial investment of IDR 25 trillion but also generated a net profit of IDR 154.74 trillion after considering a WACC of 2.53%. This finding aligns with Brigham and Houston's (2019) principle that a positive NPV is a primary indicator of feasibility, and is consistent with Nugroho and Margana (2024) and Ahmad et al. (2025) who consistently found a positive NPV as a primary signal of investment feasibility. Sapna et al. (2025) also confirmed the universality of a positive NPV as a feasibility indicator across business scales.

### *Internal Rate of Return (IRR) Analysis*

The IRR of 218.69% far exceeds the WACC of 2.53% as the hurdle rate, with a margin of safety of approximately 216 percentage points. This indicates that the project's internal rate of return is highly competitive. Gitman and Zutter (2015) determined that as long as the IRR exceeds the WACC, the investment is acceptable. Using the WACC as the hurdle rate is methodologically more appropriate than the benchmark interest rate, as it reflects the actual cost of all of the company's funding sources (Brigham & Houston, 2019).

This finding is consistent with Margana and Syaefulloh (2024), Hiswandi et al. (2023), and Wardana et al. (2021), who found an IRR above the cost of capital to confirm feasibility. Hendra et al. (2024) point out a different nuance, where an IRR closer to the minimum threshold requires more stringent risk monitoring, reminding that IRR interpretation must always be contextualized with the project's scale and risk profile.

#### ***Payback Period (PP) Analysis***

A payback period of 0.43 years (approximately 5 months) indicates a very rapid capital recovery. Husnan and Pudjiastuti (2015) emphasized that the shorter the payback period, the lower the liquidity risk. This finding is consistent with Nugroho and Margana (2024) and Ridwan et al. (2022). Sapna et al. (2025) caution that payback does not consider the time value of money, so it must be combined with NPV and IRR for a comprehensive analysis.

Thus, all three methods consistently recommended project feasibility. Brigham and Houston (2019) and Margana and Syaefulloh (2024) emphasized that cross-method consistency strengthens decision validity. BCA consistently allocates significant capital expenditures for digital infrastructure, data centers, cybersecurity, and e-channel services (IDNFinancials, 2023; Kontan, 2026). Rohman et al. (2023) demonstrated that technology transformation investments analyzed using capital budgeting proved feasible for public companies.

### **CONCLUSIONS AND RECOMMENDATIONS**

This study confirms the financial feasibility of BCA's digital channel expansion based on actual operational cash flow data from BCA's audited financial statements for three full years (2023–2025). Three key findings are: The NPV reflects substantial net added value. The IRR far exceeds the WACC. Third, the Payback Period indicates very low liquidity risk.

### **FUTURE STUDY**

A limitation of this study is that the consolidated operational cash flow covers all BCA activities, not just the digital segment. Furthermore, the 2024 WACC is used as an ex-post proxy for the 2023–2025 analysis period because historical annual WACC data is not publicly available. Recommendations for future researchers include periodically updating the analysis using the latest audited operational cash flow data, adding sensitivity analysis to various cash flow scenarios, calculating the periodic average WACC if historical data is available, and considering the Profitability Index as a complementary method.

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