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**EVALUATING CAPITAL BUDGETING EFFECTIVENESS: A FIVE-YEAR ANALYSIS OF INVESTMENT METRICS AND PERFORMANCE****Mr. V. Viknesh\*1, Mr. S Anto Martin Pradeep\*2, Dr. A. Sudhanraj\*3, Ms. J. Poovitha\*4**

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**ABSTRACT**

This research project analyzes the capital budgeting practices of IWL India Private Ltd. over a five-year period from 2020 to 2024. It focuses on key financial metrics, including Net Present Value (NPV), Average Rate of Return (ARR), and Payback Period (PBP), to assess the company's investment performance. The findings indicate persistent negative NPVs, long recovery times, and declining profitability, raising concerns about the long-term viability of investment projects. The study aims to provide actionable recommendations for improving investment strategies and enhancing overall financial performance.

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**I. INTRODUCTION**

Capital budgeting is a fundamental process for businesses to make informed decisions about long-term investments. It involves evaluating potential projects or expenditures to determine their financial viability and alignment with the company's strategic objectives. By analyzing capital investments, companies can allocate resources efficiently, optimize returns, and maintain a sustainable growth trajectory. The effectiveness of capital budgeting significantly influences a company's profitability and market competitiveness.

This study focuses on analyzing the capital budgeting practices of IWL India Private Ltd. from 2020 to 2024. During this period, the company made several significant investments, and assessing the outcomes of these investments through financial tools such as Net Present Value (NPV), Average Rate of Return (ARR), and Payback Period (PBP) is essential. The results of this analysis provide insights into the company's investment performance, highlighting areas of strength and identifying challenges in generating positive cash flows and profitability.

With growing economic uncertainties and market volatility, it is critical for businesses to continuously assess their capital budgeting strategies. This study aims to evaluate the performance of IWL Private Ltd.'s investments and to provide recommendations that will help improve future decision-making, ensuring better financial outcomes and long-term sustainability. By understanding the trends and issues in the company's recent investment decisions, this research seeks to offer a roadmap for more effective capital allocation and management.

**SCOPE OF THE STUDY**

The scope of this study encompasses the analysis of capital budgeting practices at IWL India Private Ltd. specifically from the financial year 2020 to 2024. It focuses on evaluating the financial performance of investments made during this period through various metrics: NPV, ARR, and PBP. The research is limited to quantitative data derived from financial statements, company reports, and industry benchmarks. It aims to explore the relationship between investment decisions and financial outcomes, providing a framework for future strategic planning. However, the study is confined to the financial data available and does not account for qualitative factors that may also influence investment success.

**NEED FOR THE STUDY**

The study on capital budgeting practices at IWL India Private Ltd. is necessary due to the critical role that sound investment decisions play in ensuring a company's financial stability and growth. With increasing market competition and dynamic economic conditions, it is essential for businesses to evaluate their investment

performance to optimize returns and improve financial health. The analysis of key metrics such as Net Present Value (NPV), Average Rate of Return (ARR), and Payback Period (PBP) allows for a deeper understanding of how past investments have impacted profitability and cash flow management. This study aims to identify inefficiencies in the company's capital budgeting process and provide actionable recommendations to enhance decision-making, mitigate risks, and secure sustainable returns on future investments. By addressing these challenges, the company can strengthen its financial framework and ensure long-term viability.

#### OBJECTIVE OF THE STUDY

- To know the important differences, that can arise in evaluating projects when using Net Present Value (NPV), Accounting Rate of Returns (ARR) and Payback Period (PBP).
- To analyse the strengths and weakness of existing Techniques in capital budgeting.
- To make recommendations and to improve further process of capital budgeting

#### LIMITATIONS OF CAPITAL BUDGET

- All the techniques of Capital Investment budgeting presume that various investment proposals under consideration are mutually exclusive which may not practically be true in some particular circumstances.
- The techniques of Capital Investment budgeting require the estimation of future cash inflows and outflows. The future is always uncertain and the data collected for the future may not be exact. Obviously the results based on wrong data may not be good.
- There are certain factors like the morale of the employees, goodwill of the firm, etc., which cannot be correctly quantified but which otherwise substantially influence the capital decision.
- Urgency is another limitation in the evaluation of capital investment decisions.
- Uncertainty and risk pose the biggest limitation to the techniques of Capital Investment budgeting.

## II. LITERATURE REVIEW

**Mohamed Ali, Frah, and Attinkaya (2019)** studied the impact of capital budgeting on profitability in Kampala's automobile companies. Out of 240 sampled companies, 152 responded. The study found that capital budgeting decisions significantly influenced profitability, though no major differences were noted in the profitability of manufacturing companies. Key factors like fixed asset acquisition, replacement, and outsourcing expenditures were found to affect accounting profits. Hypothesis testing supported these findings.

**Yadav Anuradha's (2018)** study on Capital Budgeting Techniques (CBTs) in Delhi's micro industries aimed to analyze capital budgeting processes, assess employee capability, and identify challenges faced. The study sampled 20 small-scale companies, with 15 responses, and used statistical tools like ANOVA and Chi-Square for data analysis. Findings revealed that 85.36% of companies employed traditional techniques such as Payback Period (PBP), while few used advanced methods like Net Present Value (NPV). Due to limited funds, these companies relied on the experience of top management to address capital budgeting challenges.

**Peter Mehbazzi (2018)** surveyed 30 banking and non-banking companies of Rwanda. A questionnaire was framed which contained the information to assess the Capital Budgeting Techniques and problems related to the estimation of cash flow to evaluate a project. This study concluded that the most of the firm used IRR and discounted payback period. The researcher also concluded that some firms used the cost of equity to inflate the cash inflows instead of the overall cost of capital because the organizations which are geared must use the cost of capital instead of the cost of equity.

**Rogeria Jaon (2018)** researched the CBTs in Spain and Brazil: A Comparative Study. Furthermore, to conduct the comparative study empirical research was conducted and a questionnaire was prepared to gather data from the company of two different companies. This study concluded that the Brazilian port used only the IRR method to evaluate their projects which require heavy investments. Furthermore, to find the Internal Rate, Brazilian Port used a random rate, and finally decided one acceptable rate for investment acceptance. Besides this method, to analyze, the risk associated with the investment Brazilian company used Sensitivity Analysis. The Spanish Port used every method of Capital Budgeting including Payback Period, Internal Rate of Return, NPV Method, and the average cost of capital is used to discount the future cash flows. Besides it, the Spanish company used sensitivity analysis, simulation, and Flow chart to find out the risk associated with the projects. However, the usage of every method depended on multiple factors like the amount of capital outlay, the life of the asset, accounting profits, and threats linked with the project.

**Batra Rupali, Verma Satish (2017)** studied the Capital Budgeting operations in India and for that purpose, researchers took a random sample of 500 companies of the stock exchange. This study had main three objectives- investigation of the superiority of Capital Budgeting Techniques, effects of these techniques on organizational variables, and also studies the relationship among the different variables (scale, education of the concerned authorities, and age) and the different Capital budgeting Techniques. However, out of 500 companies, 31 companies did not give any information. So, data was collected only from 469 companies. This study concluded that in capital budgeting decisions mostly (89.8%) personnel of top management involved and a very small percentage (11.2%) of middle-level personnel involved. According to the result of this study, companies were now mostly used discounted CBTs such as NPV, IRR, and risk assessment used the Simulation Analysis. However, traditional techniques such as payback period were still used. This study also concluded that the decision of capital budgeting was also related to the size of the investment and on the expertise of the personnel.

**Bornholet (2013)** However, because of globalization, ecological changes and strategic progressed innovative improvements, recently created hypotheses and models today don't have any significant bearing and a large number of them condemn and practice their training.

**Takionda Neelakantam (2013)** studied the 'Advancement in Capital Budgeting Practices' in Indian companies with mainly three objectives- 1). To study the modern and advanced evaluation practices in Capital Budgeting. 2). To know about the popularity of Capital Budgeting Techniques. 3) To draw the empirical results based on the study. The researcher concluded that large companies used the IRR method rarely used the PBP method because it ignores the inflated effects.

**Kursite (2011)** Several examination researchers center around their crucial grants and their execution of the speculation hypothesis spending plan (e.g., Mookiezy and Henderson, 1987; Arnold and Hatzopoloss, 2000; Graham and Harvey, 2001; Cooper, Morgan, Redman and Smith, 2002 ; Brown and others., 2004; Kersey, 2011).

### III. RESEARCH METHODOLOGY

This research employs both primary and secondary data collection methods to analyze the capital budgeting practices at IWL India Private Ltd.

#### DATA COLLECTION METHOD

##### Primary Data

The study is based on financial information collected over five years, covering the financial years 2020 to 2024. Primary data sources include internal financial reports and performance metrics generated by the company.

##### Secondary Data

Secondary data is gathered from various external sources, including company yearly reports, audited financial statements, textbooks, and relevant financial magazines, to provide a comprehensive overview of investment practices.

#### DATA COLLECTION TECHNIQUES

Key financial analysis techniques used in this research include the Payback Period, Average Rate of Return, Net Present Value, and Internal Rate of Return. These techniques facilitate the evaluation of investment viability and overall performance.

#### RESEARCH DESIGN

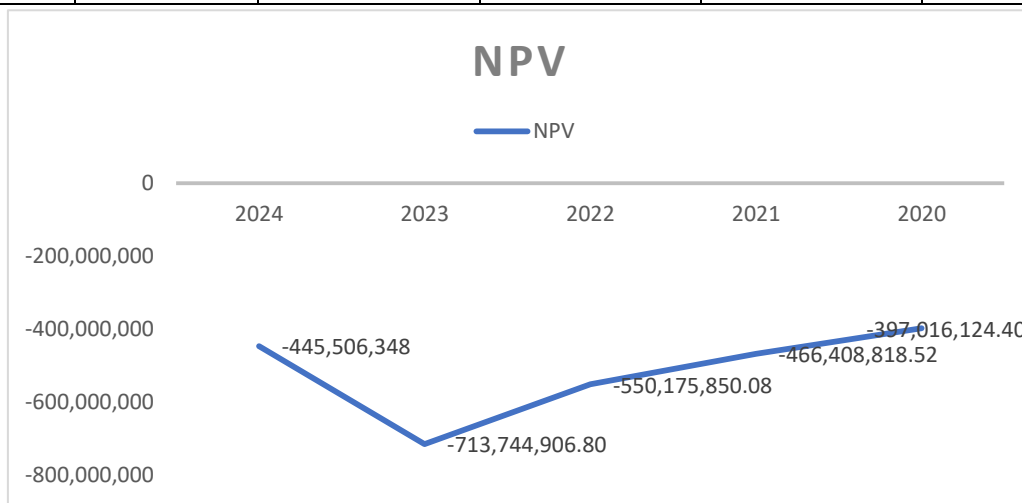
The study employs an analytical research design, allowing for a thorough examination of the financial metrics and their implications on investment decisions at IWL India Private Ltd.

**IV. DATA ANALYSIS AND INTERPRETATION**

**Table No. 4.1:** Table showing Comparison of NET PRESENT VALUE for five years from 2020 to 2024.

$$NPV = [cash\ flow \ (1+i)^t] - initial\ investment$$

Year	2024	2023	2022	2021	2020
Initial Investment	337452400	750045000	619608000	538363538	471007116
Net Cash Flow	27589950	38950000	73730000	76567017	78874397
NPV	-445,506,348	-713,744,906.80	-550,175,850.08	-466,408,818.52	-397,016,124.40



**Image 4.1**

**INTERPRETATION:**

From the above table 4.1, shows that The NPV analysis shows negative values from 2020 to 2024, indicating that the investments during these years have not been financially viable. In 2024, the NPV stands at -₹445,506,348, meaning the projected cash flows do not cover the initial investment. This trend worsens in 2023 with an NPV of -₹713,744,906.80, reflecting a substantial gap between the net cash flows and the invested amount. The consistently negative NPVs suggest that the projects are not generating sufficient returns, leading to financial losses over these years.

**Table No. 4.2:** Table showing comparison of Pay Back period for five years from 2020 to 2024

$$Payback\ period = Initial\ investment / cash\ flow\ per\ year$$

Year	2024	2023	2022	2021	2020
Initial Investment	337452400	750045000	619608000	538363538	471007116
Annual cash flow	27589950	38950000	73730000	76567017	78874397
PBP	12.23	19.26	8.4	7.03	5.97

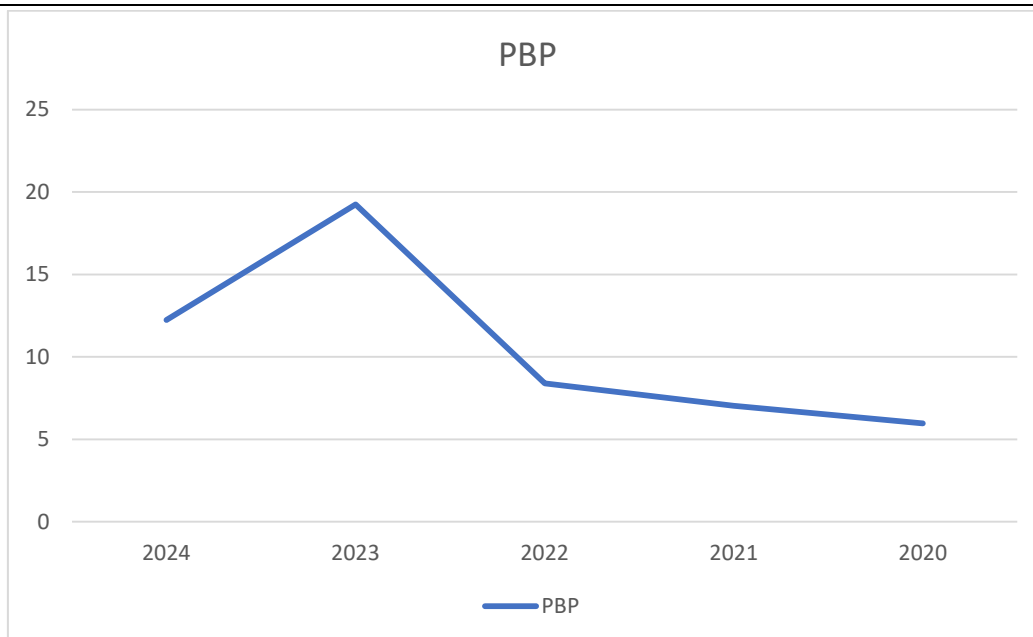


Image 4.2

**INTERPRETATION**

From the above table 4.2, it shows that The Payback Period (PBP) analysis shows that the time required to recover the initial investments has been relatively long from 2020 to 2024. In 2024, the payback period is 12.23 years, indicating a slower recovery of the investment. The situation worsens in 2023, where it takes 19.26 years to break even. However, earlier years show slightly shorter periods, with 8.4 years in 2022, 7.03 years in 2021, and 5.97 years in 2020. Overall, the longer payback periods indicate slow returns on investments, reducing the short-term financial attractiveness of the projects.

**Table No: 4.3:** Table showing comparison of average rate of return for five years from 2020 to 2024

**ARR = Average annual profit / initial investment \*100**

**Average annual profit = Total net cash flow / No. of years**

Year	2024	2023	2022	2021	2020
Average Annual profit	27589950	38950000	73730000	76567017	78874397
Investment	337452400	750045000	619608000	538363538	471007116
<b>ARR</b>	<b>8.17</b>	<b>5.19</b>	<b>11.9</b>	<b>14.2</b>	<b>16.74</b>

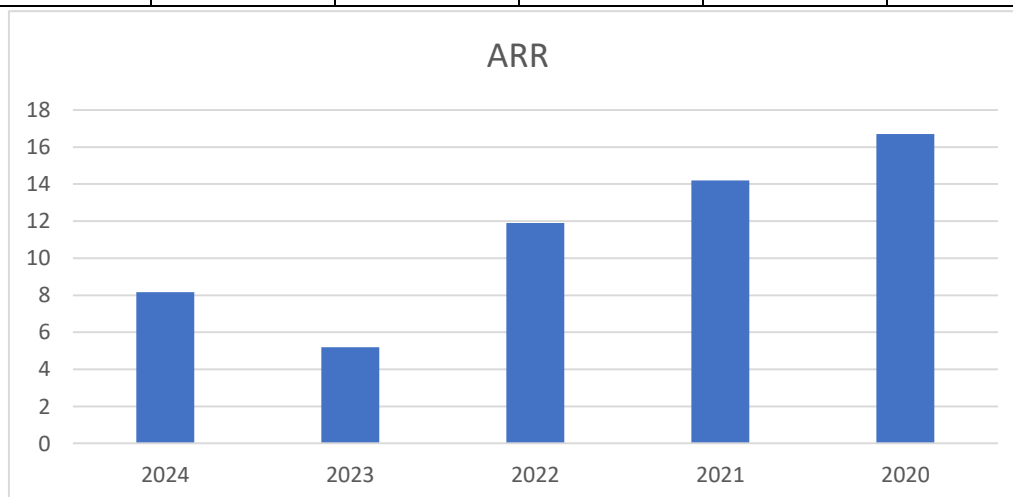


Image 4.3

**INTERPRETATION:**

From the above table 4.3, it shows that The Average Rate of Return (ARR) shows a declining trend in profitability from 2020 to 2024. In 2024, the ARR stands at 8.17%, indicating a moderate return on investment, while in 2023, it drops further to 5.19%, reflecting lower profitability. Earlier years performed better, with ARR values of 11.9% in 2022, 14.2% in 2021, and 16.74% in 2020, showing stronger returns during those periods. The overall decline in ARR suggests that the company's investments are becoming less profitable over time, raising concerns about the long-term sustainability of returns.

**V. FINDINGS**

1. The NPV analysis indicates negative values from 2020 to 2024, showing that investments during these years have not been financially viable.
2. The NPV in 2024 is -₹445,506,348, and in 2023 it worsens to -₹713,744,906.80, indicating a significant gap between net cash flows and investments.
3. The Payback Period (PBP) in 2024 is 12.23 years, while in 2023, it extends to 19.26 years, reflecting slow recovery of investments.
4. In earlier years, payback periods are shorter, with 5.97 years in 2020 and 7.03 years in 2021, suggesting slightly faster returns on investment.
5. The Average Rate of Return (ARR) declines from 16.74% in 2020 to 8.17% in 2024, indicating a reduction in profitability over time.
6. The long payback periods across the years demonstrate that investments are taking considerable time to generate sufficient cash flow.
7. The significant increase in payback period to 19.26 years in 2023 indicates a major inefficiency in recovering the investment.
8. The continuous decline in NPV from 2020 to 2024 suggests underperformance of investments due to financial planning or execution issues.
9. The substantial drop in ARR from 2020 to 2023 signals a marked decrease in profitability, raising concerns about long-term investment viability.
10. The findings reflect a need for reassessment of investment strategies to ensure quicker returns and improved profitability.

**VI. SUGGESTION**

1. Reevaluate investment strategies to focus on projects with higher potential for positive cash flows and profitability.
2. Improve cash flow management by optimizing operational efficiency and controlling costs to accelerate cash inflows.
3. Prioritize projects that offer shorter payback periods and better profitability to enhance financial stability.
4. Implement more robust risk management practices to ensure consistent returns on investment.
5. Refine project selection criteria to avoid ventures with prolonged payback periods and declining returns.
6. Enhance financial forecasting models to better predict future performance and make informed investment decisions.
7. Regularly monitor and analyze key financial indicators to identify trends and adjust strategies as needed.
8. Consider diversifying the investment portfolio or exploring new ventures with higher profitability potential.

**VII. CONCLUSION**

The analysis of capital budgeting practices at IWL India Private Ltd. from 2020 to 2024 highlights significant challenges in investment performance. Negative Net Present Values (NPV), extended Payback Periods, and declining Average Rate of Return (ARR) indicate that the projects undertaken during this period have not been financially viable. The consistently negative NPV and prolonged payback times suggest that investments have not generated sufficient cash flow to cover initial costs, leading to financial strain. Additionally, the sharp decline in ARR reflects a drop in profitability, raising concerns about the long-term sustainability of the company's projects. To improve future performance, IWL must adopt a more strategic approach to capital budgeting, focusing on more profitable projects with shorter payback periods and improving risk management and financial forecasting processes.

### VIII. REFERENCE

- [1] Klammer, Thomas P. "Empirical Evidence of the Adoption of Sophisticated Capital Budgeting Techniques," *The Journal of Business*, July 1972, 387-397.
- [2] Klammer, Thomas P. and Michael C. Walker, "The Continuing Increase in the Use of Sophisticated Capital Budgeting Techniques," *California Management Review*, fall 1984, 137-148
- [3] Fremgen, James, "Capital Budgeting Practices: A Survey," *Management Accounting*, May 1973, 19-25
- [4] Petty, J. William Petty, David P. Scott, and Monroe M. Bird, "The Capital Expenditure Decision-Making Process of Large Corporations," *The Engineering Economist*, Spring 1975, 159-171
- [5] Gitman, Lawrence G. and Forrester, John R. Jr., "A Survey of Capital Budgeting Techniques Used by Major U.S. Firms", *Financial Management*, Fall 1977, pg 66-71
- [6] Kim, Suk H. and Farragher, Edward J, "Current Capital Budgeting Practices," *Management Accounting*, June 1981, pg. 26-30
- [7] Ross Marc, *Capital Budgeting Practices of Twelve Large Manufacturers*, *Financial Management* (winter 1986) vol. 15, issue 4, pp 15-22.