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A STUDY ON CAPITAL BUDGETING @ JINDAL SAW LIMITED

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Abstract: Steel industry was only able to find true equality in the country after obtaining self-administration. Some of the largest manufacturers of the metal include steel-making businesses including Cesar Steel, Ispat Industries, and Lloyd's Steel. Due to the recent rise in steel demand and the strengthening of buildings and bridges, as well as the worldwide real estate boom, the company has been able to expand its manufacturing capabilities. In this study, selected PAYBACK period, NET PRESENT VALUE, AVERAGE RATE OF RETURN, INTERNAL RATE OF RETURN, and PROFITABILITY INDEX with 5 years data of Jindal saw limited for the calculation.

I. INTRODUCTION

STEEL INDUSTRY

The country's steel sector has seen some advancements since its foundation. In Kulti, West Bengal, in the year 1870, the modest beginnings of India's largest steel exchange were established. However, the establishment of the steel industry at Jamshedpur, Bihar, in 1907 signalled the clear beginning of a more significant invention. Its creation started in 1912. The new neighbourhood was given the name J.R.D. Tata. The steel mills in Buranpur and Bhadravati adopted this tactic without hesitation in 1919 and 1923.

Jindal Saw Ltd is a listed public company incorporated on 31 October, 1984. It is secret as a public limited company and is situated in Unnao, Uttar Pradesh. Its authorized share capital is INR 455.00 cr and the total paid-up capital is INR 63.95 cr. Jindal SAW Ltd. (JSL) is the market leader capacity wise in manufacturing of large diameter submerged arc welded (saw) pipes using U-O-E, J-C-O and helical processes. The saw pipes are mainly used in transportation of oil, gas, water and slurry.

CAPITAL BUDGETING

Making decisions on long-term asset investments is the process of capital budgeting. It is the process of choosing whether or not to engage in a specific project because not all investment opportunities will be profitable.

Literature Review

1. Capital budgeting: A systematic review of the literature Rogério and Paula de Souza Michelin Antonio Cezar Bornia, Joo Lunkes, and Production (2020) Identifying research possibilities of this essay. Originality: This study adds to the literature by outlining a methodology spot budgeting discrepancies with previously published scientific research. It also advances engineering management practise by highlighting the challenges faced by engineering managers when creating capital budgets.

2. Capital budgeting practices in large U.S. cities Aman Khan, Engineering Economist 2019- an important aspect of decision-making in governments. Recent years have witnessed significant developments in techniques which range from simple cost-benefit analysis to more complex decision-making models. The purpose of this paper is to survey the extent to which the various U.S. cities currently employ some of these

techniques in developing and implementing their capital projects and programs. © 1987 Taylor and Francis Group, LLC.

3. Practises of non-financial corporations listed on the Kuwait Stock Exchange (KSE) in capital budgeting Area of research 2021 (.EX:- Ahmed, 17; Alhamoud & Ibrahim, Citation1997; Al-Mutairi et al., Citation2009; Babu & Sharma, Citation1996; Daunfeldt & Hartwig, Citation2012; Eljelly & Abu Idris, Citation2001; El-Daour & Abu Shaaban, Citation2014; El-Sady et al., Citation2011; Nishat & Haq, Citation2009; Ramesh & Nimalathan, Citation2011; Shinoda, Citation2010). Utilizing a questionnaire similar to that used in previous research is important since it facilitates comparison.

4. Quality and Quantity (2021) by Lakshman Alles, Ruwan Jayathilaka, Selvaraj Sharmila, and others the scope for this study, both an econometric quantitative analysis and the content analysis qualitative research approach were used. The investigation was carried out throughout a number of divisional councils in the Sri Lankan district of Colombo. A sample of SMEs was gathered from each divisional council within these divisions using stratified random sampling.

5. Evidence from Lebanon on capital budgeting practises and political risk David M. Power, Suzanne G.M. Field, and Ahmed Bakri. Financial Markets Qualitative Research (2022) -This study intends to investigate how capital investment projects are valued in Lebanon, whether Lebanese businesses consider risk throughout this process, and how political risk affects capital budgeting. Design/methodology/approach:

6. Capital budgeting and managerial empire building Accounting and business research student Katrin Weiskirchner-Merter (2022) I look at how a company's headquarters uses a manager who is expanding his or her empire's report on decision-relevant private information to decide on capital budgeting and pay the manager. To do this, I create a model that consists of the principle (headquarters) and the agent (manager), who provides information on the anticipated profitability of the investment project.

7. Sureka R, Kumar S & Colombage S Research in International Business and Finance (2022) 60. This study synthesizes and reviews the existing and their application to theories, contexts, characteristics and methodology. It aims to identify the prevalent issues and gaps in the literature and provide potential avenues for future research. After comprehensive search and rigorous scrutiny, this review encompasses 185 articles. A systematic literature review (SLR), triangulated with the bibliometric method, is carried out, adopting a meticulous approach to achieve a comprehensive overview of the field. Based on cluster analysis, four distinct themes are identified. Additionally, a conceptual framework is developed that shows the antecedents, moderators and outcomes of research on capital budgeting. Grounded on the detailed content analysis.

8. Business Process Improvement and Capital Budgeting Analysis to Develop the Digitalization Process of Loan / Financing in Bank Sumsel Babel Oktofa Yudha Sudrajad, International Journal of Current Science Research and Review (2023) PT Bank Pembangunan Daerah Sumatera Selatan dan Bangka Belitung (brand name: Bank Sumsel Babel) is one of the regional state-owned enterprises (SOEs) engaged in the banking sector. As a local company with a great purpose, Bank Sumsel Babel has a big responsibility to support all industries in the region province of South Sumatera and the Bangka Belitung Islands.

9. Feasibility Study for Tugboat Expansion Project Using Capital Budgeting And Sensitivity Analysis (Case Study: PT. ABCD) Wibastyantoro B. International Journal of Current Science Research and Review (2023) 06(02) .The Covid-19 pandemic and the unstable geopolitical environment has highly disrupted the global economy. The turn of events affected businesses sectors differently, due the disruption of the supply chain many industries have to suffer.

10. Capital Budgeting Practices: A Survey of Two Industries Journal of Risk and Financial Management (2023) 16(3) 191 This research examines the capital budgeting practices used by small and medium-sized firms (SMEs) in two Portuguese industries, footwear and metalworking, aiming at answering the following research questions: How much knowledge do managers have about capital budgeting practices? What are the most used practices? How much importance do they attribute to applying them? The research was conducted through an online survey with a response rate of 14.9%. The results document that most companies in both industries are familiar with capital budgeting practices.

OBJECTIVES OF THE STUDY

1. To determine if capital budgeting is the best method for gauging the success of a manufacturing company.
2. To examine the capital budgeting method as it is mostly used to estimate the expansion of current operational activities based on the company's annual turnover.

Need for the study

Budgeting for capital projects is crucial because it fosters accountability and measurement. Any company that wants to commit resources to a venture without fully comprehending the dangers and potential rewards will be viewed as irresponsible by its owners or shareholders. Additionally, if a company has a mechanism to assess the success of its investment choices, it is unlikely that it would survive in the cutthroat commercial environment.

Companies frequently find themselves in a situation where their funding is constrained and their options are limited. Decisions on how to divide up labour hours, capital, and resources are often up to management. As it describes the goals for a project, capital budgeting is crucial to this process. These goals can be compared to those of other initiatives to determine which one or more suitable.

DATA & Methodology

The total study, for which multiple tests were used to obtain the conclusion, was designed to demonstrate that CB is the most effective instrument in assessing the success of industrial firms. Chi-square test, percentage comparisons, and other tests are collected and presented as follows for a better understanding of the outcomes in order to comprehend and evaluate the aforementioned hypotheses. To comprehend the impacts on capital budgeting approaches, three factors—the age of the firm, its yearly turnover, and its amount of capital budget—have been researched.

Sampling and Data Gathering Technique For the current study both Primary and secondary data shall be collected as follows:

Secondary data

Secondary Data –articles, internet, emails etc. Due to qualitative nature of the study, it is assumed that besides the questions included in the schedule, online databases, and internet, annual reports of company / stores and company stores and company websites will act as secondary data sources in the research.

DATA ANALYSIS AND INTERPRETATION

1) PaybackPeriodAnalysis

It describes the time frame during which the enterprise will bring in enough money to cover the initial expenditure.

Discounted Payback Period:

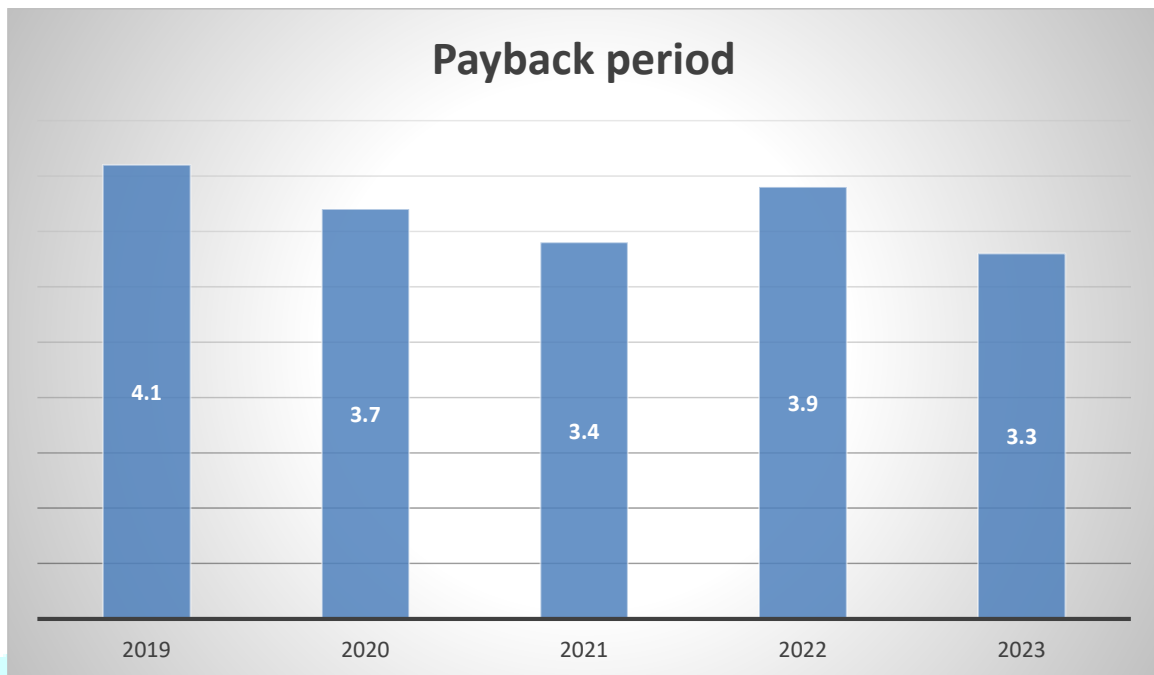
This approach combines the NPV and the payback period. After discounting the cash flows, it determines the payback time.

In case of even cash flows, payback period can be calculated as follows:

$$\text{Payback period} = \frac{\text{Initial Investment}}{\text{Annual Cash Flow}}$$

Year	Cost of the Asset (Rs. In Crore)	Annual cash Inflow (Rs. In Crore)	Payback period
2019	3.347	.821	4.1
2020	3.255	.889	3.7
2021	2.962	.883	3.4
2022	2.899	.735	3.9
2023	2.91	.894	3.3

The above table clearly shows that the payback period differs according to the amount invested in particular years. The 'X' axis denotes first 5 years from 2019. The 'Y' axis denotes time period. In the first year 2019, annual cash inflow is .821 crores and the payback period 4.1 and the payback period for fifth year 2023 are 3.3. Comparatively payback period for the year 2023 is less.



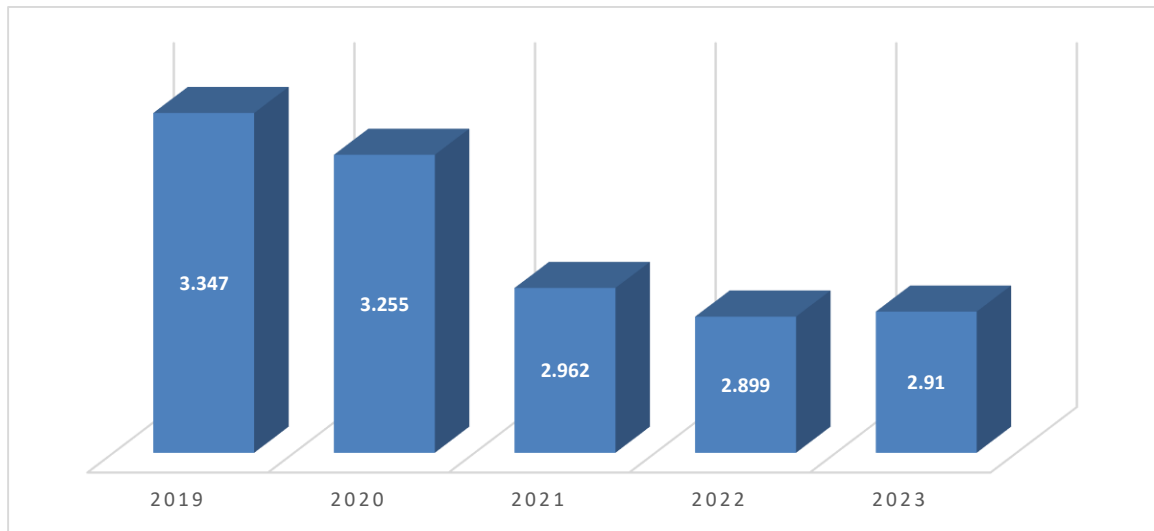
2) **Net Present Value Method (NPV)**: It uses a discounted cash flow technique that takes time value of money into account. It claims that because a project's future cash flows are received across a range of time periods, they can only be compared to the cost of the project today if the future cash flows are discounted to their present value.

Calculation of Net Present Value

Year	Cash outflows (Rs. In Crore)	Discounting present value Table (Present value of Re.1 @ 10 %)	Present Value of Net Cash Flows	Cash inflow
2019	3.347	0.909	3.042423	3.347
2020	3.255	0.826	2.68863	3.255
2021	2.962	0.751	2.224462	2.962
2022	2.899	0.683	1.980017	2.899
2023	2.91	0.621	1.80711	2.91
		TOTAL =	11.742642	15.373

Inference

The investment scheme must be accepted if its NPV is positive and rejected if it has a negative NPV, according to the getting criterion for the NPV technique. positively impacts the shareholders' net worth, which should raise the price of a company's stock. Only if the project produces cash inflows at a pace greater than the occasion cost of capital will the NPV be positive.



3) Average Rate of Return: (ARR – Also known as Return on Investment):

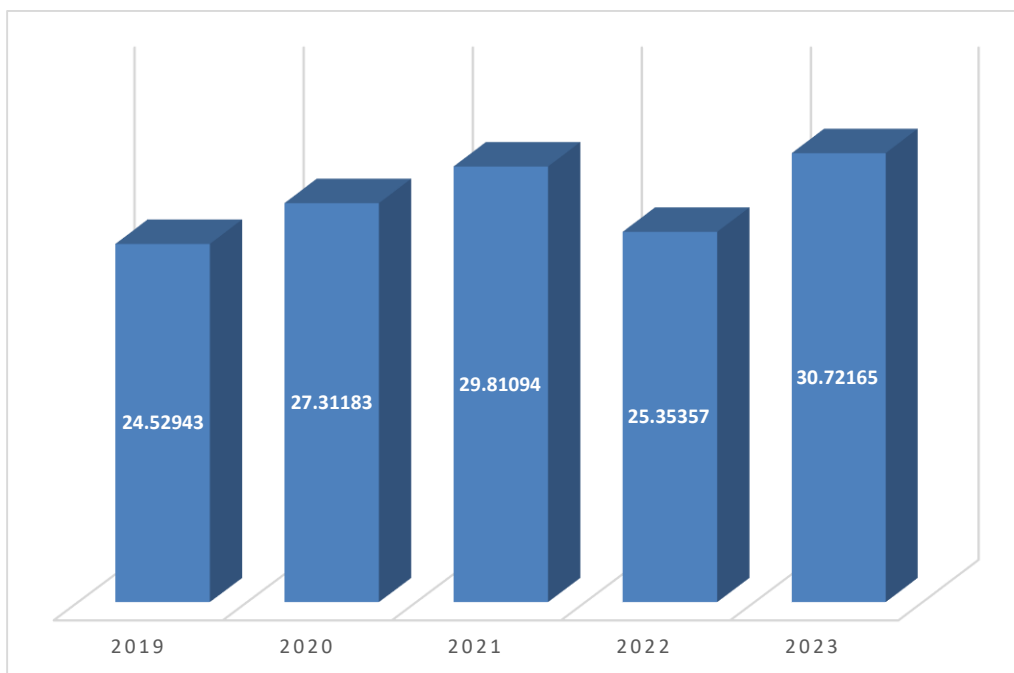
$$\text{Average rate of return} = \frac{\text{Average Annual Net Earnings}}{\text{Average Investment}} \times 100$$

$$\text{Average investment} = \frac{\text{Original Investment} - \text{Scrap Value}}{2}$$

ARR Analysis

Year	Annualprofit	Investment	RateofReturn %
2019	0.821	3.347	24.52943
2020	0.889	3.255	27.31183
2021	0.883	2.962	29.81094
2022	0.735	2.899	25.35357
2023	0.894	2.91	30.72165

The graph demonstrates that the company's estimated rate of return was below the minimal rate in 2019 and 2023, allowing for a reduction in the investment in the specific project. The project has a better rate of return than the minimal rate in 2020, 2019, 2021, and 2022. A greater rate of return means that an investment made in a given year will likely generate more cash in the future.

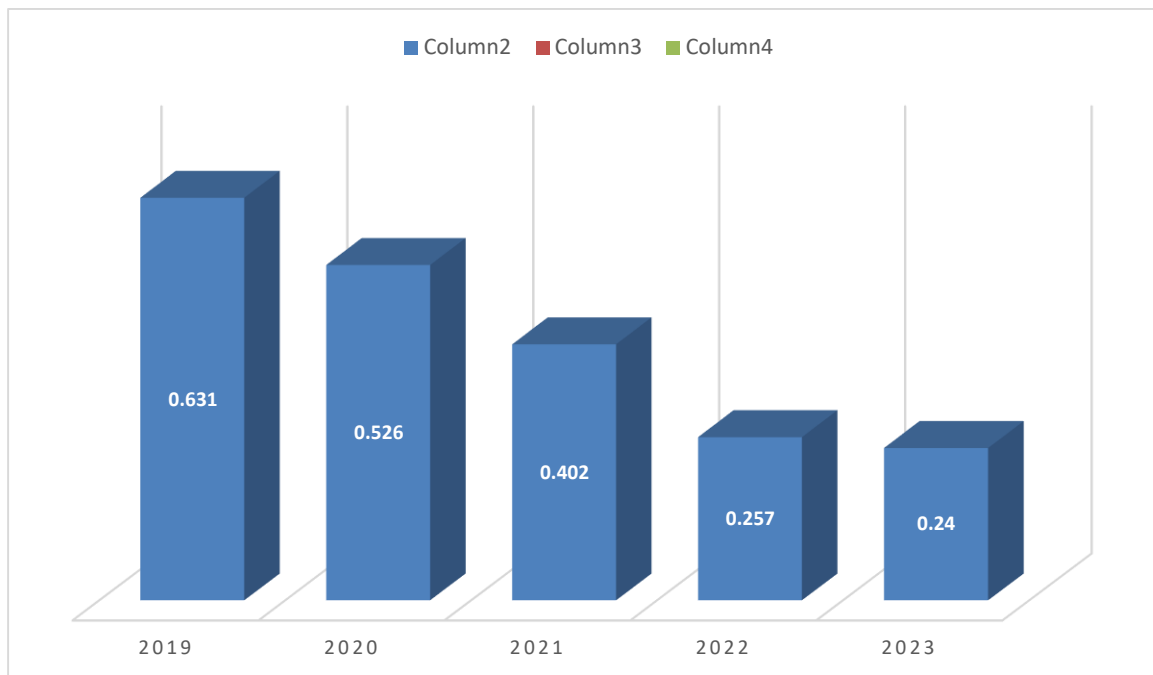


4 INTERNAL RATE OF RETURN

$$IRR = \text{Lower Rate} + \left[\frac{NPV \text{ at Lower Rate}}{NPV \text{ at Lower Rate} + NPV \text{ at Higher Rate}} \right] \times (\text{Higher Rate} - \text{Lower Rate})$$

YEAR	CFAT	TVPS(Rs)	DF (10%)	DF (30%)	TVPS(Rs)
2019	.821	3.347	0.909	0.769	0.631
2020	.889	3.255	0.826	0.592	0.526
2021	.883	2.962	0.751	0.455	0.402
2022	.735	2.899	0.683	0.350	0.257
2023	.894	2.91	0.621	0.269	0.240
	PV of Cash Inflows		15.373	2.056	
	Less: PV of Cash Outflows		11.742	2.056	
	NPV		3.631	-1.575	

Interpretation: in the above table showing that the IRR in 2019 was 0.631, it was decreasing year by year drastically.



5. PROFITABILITYINDEX(PI) / Benefit Cost Ratio (Desirability Factor):

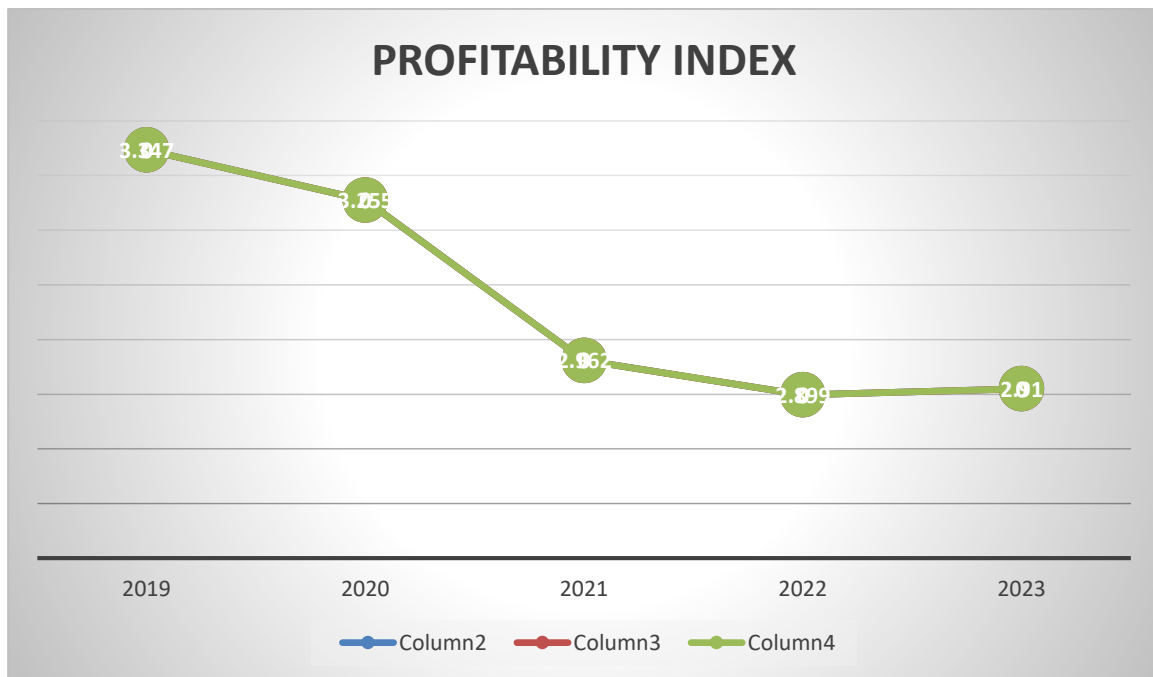
It is the proportion of the investment amount to the profits' present value. It's an adaptation of the NPV approach. The NPV approach cannot be applied to projects with variable investment sizes. In the event of various investment sizes, it is vital to link the investment flows. The PI Method is used for this.

$$\text{Profitability Index} = \frac{\text{Discounted Cash Inflow}}{\text{Discounted Cash Outflow}}$$

$$\text{Profitability Ratio} = \frac{\text{Discounted Cash Inflow}}{\text{Discounted Cash Outflow}} \times 100$$

Year	Cash outflows (Rs. In Crore)	Discounting present value Table (Present value of Re.1 @ 10 %)	Present Value of Net Cash Flows	Cash inflow
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		TOTAL =	11.742642	15.373

Interpretation: in the above table showing that the Profitability Index in 2019 was 3.347, it was decreasing year by year drastically.



Findings:

1. The above table clearly shows that the payback period differs according to the amount invested in particular years. The 'X' axis denotes first 5 years from 2019. The 'Y' axis denotes time period. In the first year 2019, annual cash inflow is .821 crores and the payback period 4.1 and the payback period for fifth year 2023 are 3.3. Comparatively payback period for the year 2023 is less.
2. The acceptance rule using the NPV method is to accept the investment project if it's NPV positive and to reject if it's NPV is negative. Positive contributes to the net wealth of the shareholders, which should result in the increased price of a firm's share. The NPV value will result only if the project generates cash inflows rate higher than the opportunity cost of capital.
3. The chart shows that, in the year 2019 and in the year 2023 the company had lower predictable rate of return than the minimum rate so the investment on the particular project can be reduced. In the year 2020, 2019, 2021 and 2022 the project has a higher rate of return than the minimum rate. Higher rate of return indicates that investment made in the particular year has higher cash inflow in the future.
4. In the above table showing that the IRR in 2019 was 0.631, it was decreasing year by year drastically.
5. In the above table showing that the Profitability Index in 2019 was 3.347, it was decreasing year by year drastically.

CONCLUSION

Through this study it is very clear that capital budgeting essentially involves evaluation of the worth of capital investment proposals based on estimates of cash inflows and outflows. The study emphasizes that efficient allocation of capital is the most important finance function in the modern times. Thus, capital budgeting or investment decisions are of considerable importance to the firm, since they tend to determine its value by influencing its growth, profitability and risk. The analysis of payback period and Average Rate of Returns conclude that management should take efforts to perform the capital budget in efficient manner.

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