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A STUDY ON CAPITAL BUDGETING IN BUILDING MATERIALS INDUSTRY

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ABSTRACT :

Capital budgeting is a crucial process for businesses to evaluate potential long-term investments. It involves analyzing various projects to determine their feasibility and potential profitability. This abstract provides an overview of capital budgeting techniques, such as Net Present Value (NPV), Internal Rate of Return (IRR), and payback period, along with their strengths and limitations. Additionally, it explores factors to consider when making investment decisions, including risk assessment, project synergy, and capital rationing. Understanding capital budgeting helps businesses make informed decisions about allocating resources to projects that align with their strategic objectives and maximize shareholder value.

Key words:- capital,equity,investment,long term planning.

Introduction:

Capital budgeting is the process a business undertakes to evaluate potential major projects or investments. Construction of a new plant or a big investment in an outside venture are examples of projects that would require capital budgeting before they are approved or rejected.
Capital budgeting in corporate finance is the planning process used todetermine whether an organization's long term capital investments such as new machinery, replacement of machinery, new plants, new products, and research development projects are worth the funding of cash through the firm's capitalization structure (debt, equity or retained earnings). It is the process of allocating resources for major capital, or investment, expenditures. An underlying goal, consistent with the overall approach incorporate finance, is to increase the value of the firm to the share holders.
Capital budgeting is typically considered a non-core business activityas it is not part of the revenue model or models of most types of firms, or even a part of daily operations. It holds a strategic financial function within a business. One example of a firm type where capital budgeting is possibly a part of the core business activities is with investment banks, as their revenue model or models rely on financial strategy to a considerable degree.

Process of capital budgeting:

Capital budgeting is used by companies to evaluate major projects and investments, such as new plants or equipment. The process involves analyzing a project's cash inflows and outflows to determine whether the expected return meets a set benchmark.

Objectives of the Study:

- To study the various capital budgeting methods are being implemented in the organization.
- To evaluate the capital budgeting methods are being implemented in the organization.
- To suggest the better financial performance in the organizations.

Review of Literature:

A company refers it's financial assessments of the capital investments in the capital budgeting.Capital budgeting is a part of assessing the decision to make investments. The financial management and the capital investment decision-making are fundamental for it's success and survival in long term. Different organizations use different types of decision-makers to adopt the decisions related to the referred budgeting. Research provided inconclusive evidence regarding the capital budgeting payback period (PP) as the most popular technique employed in evaluating projects. other investigations demonstrated that discounted cash-flows practices are the most frequently used capital budgeting techniques. One of the most crucial choices each organization's financial management must make is its capital budget. When weighing the significance of capital investment decisions, managers must take the necessary precautions to make a wise choice. The managers make a number of arbitrary calls when making investing selections. Although many different approaches have been put forth in the literature, subjective approaches have received less focus. First, the choice of capital investments has a big impact on how quickly a company grows; a poor choice could lead to the demise of the business. Second, making such choices costs a lot of money. Also adding to their complexity is the fact that they are among the most uncertain judgments in terms of future cash flow estimates as well as the social, technological, economic, and political effects on the estimates.The financial management and the capital investment decision-making are fundamental for the survival and success of the company in the long term.

Objectives of the Study:

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Need of the Study:

- The success and failure of business mainly depends on capital budgeting. Capital budgeting is necessary because large sums of money are involved for accruing fixed assets.
- Capital budgeting is important because it creates accountability and measurability. Any business that seeks to invest it resources in a project without understanding the risks and return involved would be held as irresponsible by its owners or shareholders

Scope of the Study:

- The present study has been undertaken to study and find out the effectiveness of capital budgeting method in the organization. To find out whether the organization used for decision making of the long term investment of the organization. For taking better financial decisions.

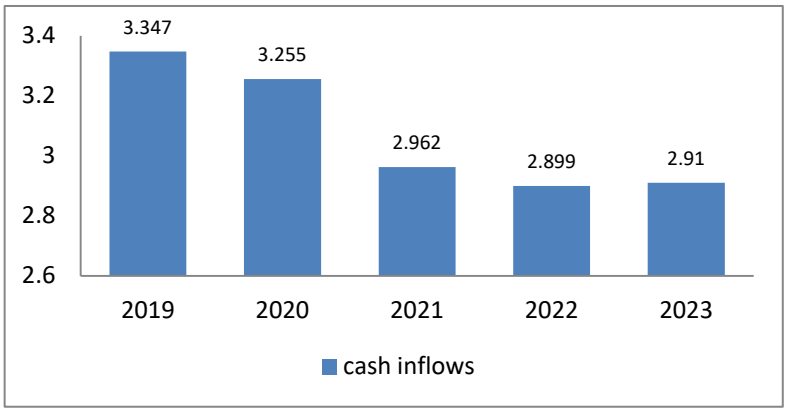
Data analysis & interpretation:

Table:1

Payback Period Analysis

years	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	.753	3.9
2023	2.91	.849	3.3

CHANGES IN PAY BACK METHOD



Interpretation :

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 2021 are 3.3. Comparatively payback period for the year 2023 is less.

Table:2

Net present value method:

Present value = Cash flows * Present value of Re. 1 @ 10% discount using present value table

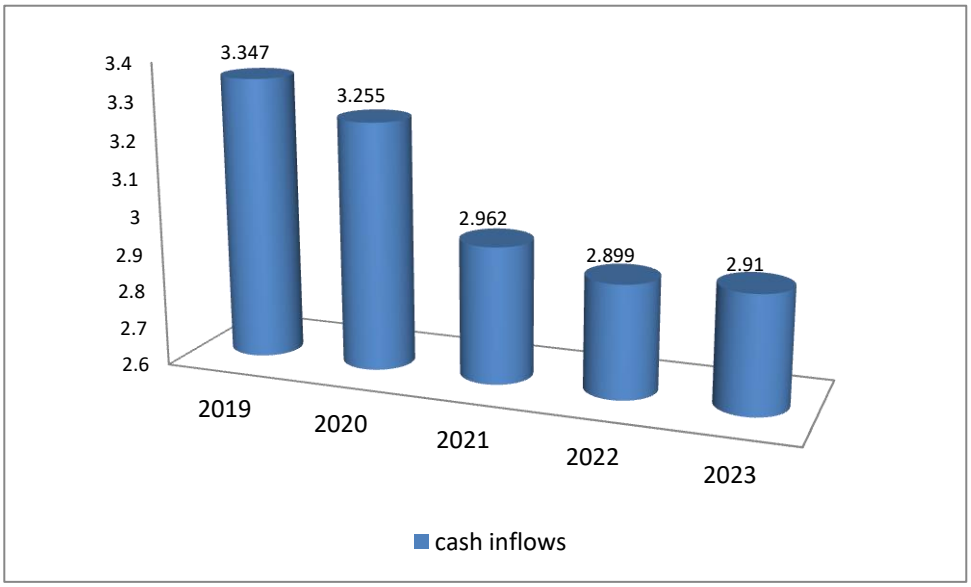
Net present value = Present value of all cash inflows – present value of initial investment.

Calculation of Net present value

Year	**Cashoutflows (Rs.InCrore)**	**Discounting presentvalue Table (Presentvaleof Re.1 @10 %)**	**PresentValue of Net Cash Flows**	**Cashinflow**
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	2.91	1.80711	2.91
		TOTAL=	**11.742642**	**15.373**

Calculation

Present value of all cash flows	15, 37,30,000
Less: Present value of Initial Investment	11, 74,26, 420
Net Present Value(2009-11)	**3,63,03,580**



Interpretation :

The acceptance rule using the Net Present Value method is to accept the investment project if its net present value is 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 positive net present value will result only if the project generates cash inflows at a rate higher than the opportunity cost of capital.

- Accept the project when NPV > 0
- Reject the project when NPV < 0
- May of may not accept the project when NPV = 0

Above table clearly indicates that the Net Present Value for the 5 years from 2008 to 2022 is 3, 63, 03,580

Table:3

Average Rate of Return:

$$ARR=\frac{Average\ income}{Average\ investment}$$

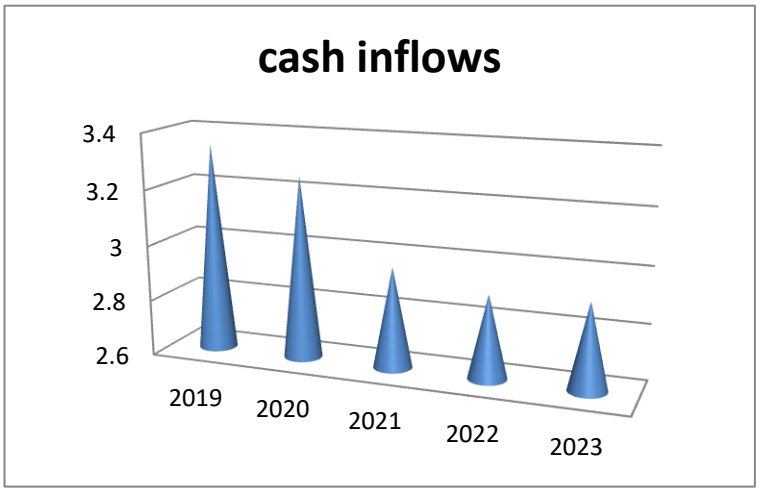
Average Rate of Return Analysis

Year	Annual profit	Investment	Rate of return %
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**

Calculation

$$\text{Average Rate of Return} = \frac{\text{Average income}}{Average\ investment} + \frac{.844}{3.07} = 27.50\%$$

Changes in average rate of return



Interpretention:

The chart shows that, in the year 2019 and in the year 2023 the company had lower expected rate of return than the minimum rate so the investment on the particular project can be reduced. In the year 2019, 2020, 2021, 2022,2023 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.

INTERNAL RATE OF RETURN:

Table:4

Computation of IRR is based on the cash flow after taxes. IRR is mathematically represented as 'r'. It can be found out by trial and error method. In this method the elevator selects any discount rate (by calculating fake PBP) to compute the present value of the cash inflows.

Formula:

$$IRR=LDF\%+DF\frac{PVLDF-COF}{PVLDF-PVHDF}$$

Calculation of internal rate OF return

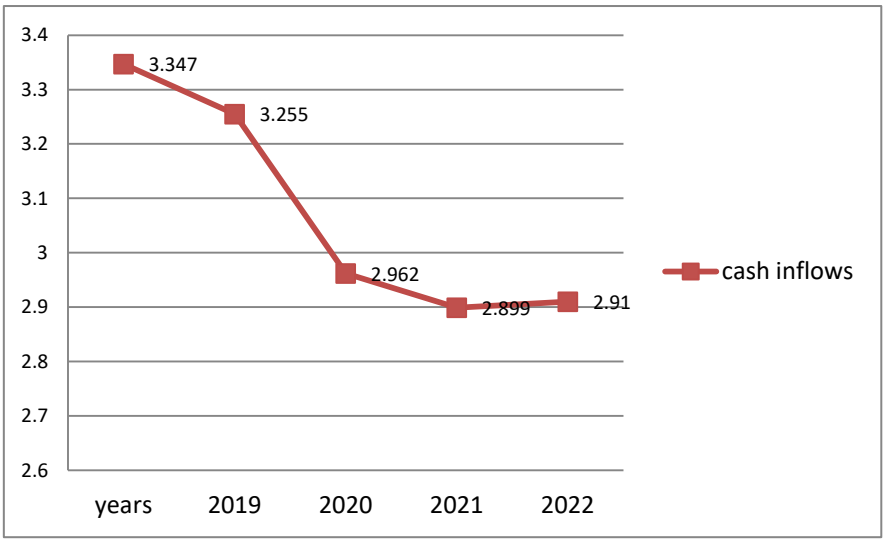
YEAR	CFAT	TVPS (Rs)	DF (10%)	DF (30%)	TVPS (Rs)
2009	.821	3.347	0.909	0.769	0.631
2010	.889	3.255	0.826	0.592	0.526
2011	.883	2.962	0.751	0.455	0.402
2012	.735	2.899	0.683	0.350	0.257
2013	.894	2.91	0.621	0.269	0.240
	PVof Ca	cashInflows	**15.373**	**2.056**	
	Less:PV of	Cash Outflows	**11.742**	**2.056**	
	NetPresent Value		**3.631**	**-1.575**	

IRR = 10 %+(30-10)$\frac{15.373-2.056}{15.373-11.742}$

=10%+73.35

IRR=83.35%

Internal rate of return



Interpretation :

The chart shows that, in the year 2019 and in the year 2023 the company had lower expected internal rate of return than the minimum rate so the investment on the particular project can be reduced. In the year 2019, 2020, 2021,2022 ,2023 the project has a higher internal 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.

Profitability index:

Table:5

Profitability index (PI), also known as profit investment ratio (PIR) and value investment ratio (VIR), is the ratio of payoff to investment of a proposed project. It is a useful tool for ranking projects because it allows you to quantify the amount of value created per unit of investment.

The ratio is calculated as follows

FORMULA

Profitability index = $\frac{Pv\ of\ future\ cash\ value}{initial\ investment}$

Year	Cash outflows(Rs. In Crore)	Discounting present value Table	Present Valueof NetCash Flows	Cash inflow

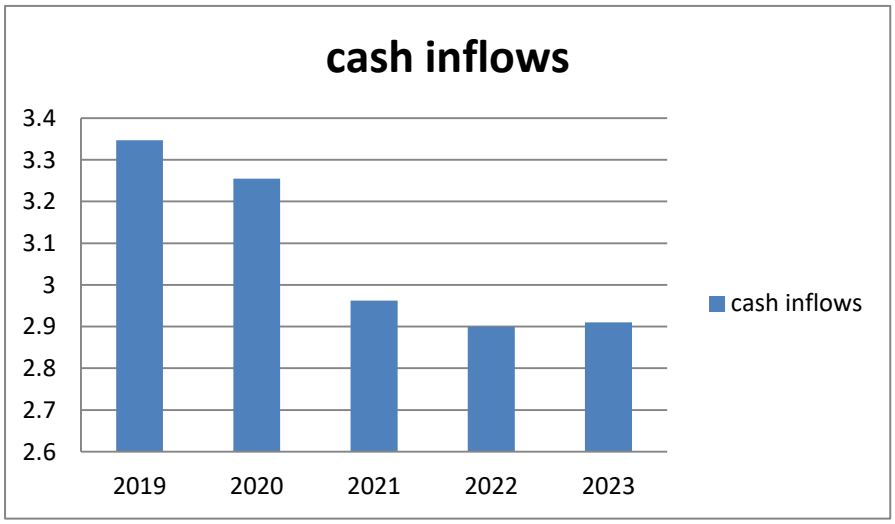
		(Presentvalueof Re.1 @10%)		
2018	3.347	0.909	3.042423	3.347
2019	3.255	0.826	2.68863	3.255
2020	2.962	0.751	2.224462	2.962
2021	2.899	0.683	1.980017	2.899
2022	2.91	0.621	1.80711	2.91
		TOTAL	**11.742642**	**15.373**

FORMULA PROFITABILITY INDEX = PV OF CASH INFLOWS ÷ INITIAL INVESTMENT

PI = 11.74562 ÷ 15.373

PI = 0.764

Profitability index:



Interpretation:

PI is lesser than 1 so Reject the proposal

It indicates that for every one rupee investment there will be 0.0764 loss.

Findings:

- The ACC blocks project has 3.19 of payback period and plastering mortar project has 4.91 of payback period. The project is accepted when pay back is less than 5 years which is Standard payback set by the management. So, less payback period is accepted.
- As per the management the minimum rate of return expected is 10%. The project ARR Greater than 40% then, ACC blocks project is accepted.
- The net income of the project is discounted at the minimum required rate return which is grater then-8% and NPV is positive so the project is accepted.
- The current year 2022 pay back priod is fouind to be in 1 year, this shows that the company recovers its investment in 2 years.

Suggestions:

Here are few suggestions which can be utilized by the company to change few draw backs into success

- It is concluded that the project is viable and profitable as the ARR is getting more than 40%
- The payback indicates that the investment is fully recovered in short period. NPV of the project is considered as better because of its higher net present value
- The IRR of the project is giving higher rate of return.
- The profitability index is more than the giving value and where projects show NPV as positive.
- To offer suggestions to the Fusion building materials ltd., To improve its financial performance.

Conclusion:

The planning process which is used to determine whether the long term investments of an organization such as replacement machinery, products that are new, new plants and research development projects are worth seeking is the Investment appraisal or capital budgeting. 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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