

## CAPITAL BUDGETING PRACTICES IN BEVERAGES INDUSTRIES IN NEPAL

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### INTRODUCTION

Capital budgeting is a process of planning capital expenditure which is to be made to maximise the long-term profitability of the organisation. Capital budgeting is a long-term planning exercise in selection of the projects which generates returns over a number of years in future and the heavy expenditure is to be incurred in the initial years of the project to generate returns over the life of the project. The term capital budgeting refers to planning for capital assets. The capital budgeting decision means a decision as to whether or not money should be invested in long-term projects such as installing a machinery or creating additional capacities to manufacture a part which at present may be purchased from outside. It includes a financial analysis of various proposals regarding capital expenditure. The Finance Manager has various tools and techniques by means of which he assists the management in taking a proper capital investment decisions. For purposes of investment appraisal, the cash flow is the incremental cash receipts less the incremental cash expenditures solely attributable to the investment in question. The future costs and revenues associated with each investment alternative are –

- a. Capital costs
- b. Operating costs
- c. Revenue
- d. Depreciation
- e. Residual value.

An investment decision implies the choice of an objective, a technique of appraisal and a length of service - the project's life. The objective and technique must be related to definite period of time. The life of the project may be determined by taking into consideration the following factors like

1. Technological obsolescence,
2. Physical deterioration
3. A decline in demand for the output of the project etc.

No matter how good a company's maintenance policy, its technological forecasting ability or its demand forecasting ability, uncertainty will always be present because of the difficulty of predicting the length of a project life. To permit realistic appraisal, the value of cash payment or receipt, must be related to the time when the transfer takes place. In particular, it must be recognised that Re. 1 received today is worth more than re. 1 receivable at some future date because Re. 1 received today could be earning interest in the intervening period. This is the concept of the time value of

money. The process of convertible future sums into their present equivalents is known as 'discounting', which is used to determine the present value of future cash flows.

### OBJECTIVES OF THE STUDY

The basic objective of the study is to analyse the Capital Budgeting (i.e. forecasted net cash outlay and annual cash flow after tax). Under the guideline of this leading objective, the following specific objectives are set in the study-

1. To overview the beverages industries in Nepal,
2. To review the Capital Budgeting Theories developed so far,
3. To analyse the empirical studies on Capital Budgeting done so far,
4. To find out the determinants of Capital Budgeting in beverages industries in Nepal,
5. To trace out the trend in beverages industries Capital Budgeting,
6. To find out the sources of financing in beverages industries,
7. To analyse the cost of capital of beverages industries in Nepal,
8. To carry out the ex-post evaluation of the performance of beverages industries in Nepal,
9. To trace out the main technique of Capital Budgeting being used and
10. To trace out the effectiveness of used technique of Capital Budgeting.

### Population and Sample

There are so many beverages companies in Nepal. The whole beverages industries are the population of the study whereas only two beverages companies are taken as sample. The names of the sample companies are –

- Sunrise Nepal Food & Beverages Pvt. Ltd.
- Birgunj Pure Drinking Water Udyog.

## Capital Budgeting Tools used by Nepalese Beverages Industries

For the purpose of the study, capital budgeting is classified into three categories (i) Capital budgeting under certainty (ii) Capital budgeting under risk and uncertainty and (iii) Capital budgeting under foreign direct investment. Following are the tools which are used to analyse the projects:

**Table 1: CB Tools used by Nepalese Beverages Industries**

CB under Certainty	CB under Uncertainty	CB under FDI
<ul style="list-style-type: none"> <li>• Payback Period (PBP)</li> <li>• Accounting Rate of Return (ARR)</li> <li>• Net Present Value (NPV)</li> <li>• Internal Rate of Return (IRR)</li> <li>• Profitability Index (PI)</li> <li>• Modified Internal Rate of Return (MIRR)</li> <li>• Cross Over Rate</li> <li>• Discounted Payback Period (DPBP)</li> </ul>	<ul style="list-style-type: none"> <li>• Senility Analysis</li> <li>• Risk adjusted discount Rate (RADR)</li> <li>• Certainty Equivalent coefficients (CEC)</li> <li>• Probability Distribution Approach</li> <li>• Standard deviation</li> <li>• Coefficient of Variation (C.V.)</li> <li>• Normal Probability Distribution</li> <li>• Decision tree.</li> </ul>	<ul style="list-style-type: none"> <li>• Exchange Rate Risk</li> <li>• Political Risk</li> <li>• Country Risk</li> </ul>

But during the study following tools were found to be in use –

- Payback Period (PBP)
- Net Present Value (NPV)
- Internal Rate of Return (IRR)
- Profitability Index (PI)
- Accounting Rate of Return (ARR)

### Outcomes of Hypothesis

Under the study following three hypothesized were tested

First Hypothesis [Net Cash Outlay (NCO)]

$H_0: \mu = \mu_0$  (i.e. there is no significant difference between sample and the Standard NCO)

$H_1: \mu \neq \mu_0$  (i.e. there is significance different between sample and the Standard NCO)

Where,

$$\begin{aligned} \mu &= \text{Sample Mean} \\ \mu_0 &= \text{Standard Mean} \end{aligned}$$

Second Hypothesis [Net Present Value (NPV)]

$H_0: \mu = \mu_0$  (i.e. there is no significance different between sample and the Standard NPV)

$H_1: \mu \neq \mu_0$  (i.e. there is significance different between sample and the Standard NPV)

Where,

$$\begin{aligned} \mu &= \text{Sample Mean} \\ \mu_0 &= \text{Standard Mean} \end{aligned}$$

Third Hypothesis [Internal Rate of Return (IRR)]

$H_0: \mu = \mu_0$  (i.e. there is no significance different between sample and the Standard IRR)

$H_1: \mu \neq \mu_0$  (i.e. there is significance different between sample and the Standard IRR)

Where,

$$\begin{aligned} \mu &= \text{Sample Mean} \\ \mu_0 &= \text{Standard Mean} \end{aligned}$$

Following are the results of hypothesis.

- First Hypothesis [Net Cash Outlay (NCO)]

Tabulated (critical) value of  $X^2$  for 1 d. f. at 5% level of significance is 3.841 and calculated value of  $X^2 = 2,951,945.89$ . Hence, the calculated value of chi-square is greater than the tabulated value. So, it is significant. Thus, the difference between observed and expected frequencies is significant and cannot be attributed to give chance to fluctuations. It means there are significant difference between Actual (sample) & pre-determined (standard) NCO.

- Second Hypothesis [Net Present Value (NPV)]

Tabulated (critical) value of  $X^2$  for 1 d. f. at 5% level of significance is 3.841 and calculated value of  $X^2 = 743,245.94$ . Hence, the calculated value of chi-square is greater than the tabulated value, it is significant. Thus, the difference between observed and expected frequencies is significant and cannot be attributed to give chance to fluctuations. It means there are significant difference between Actual (sample) & pre-determined (standard) NPV.

- Third Hypothesis [Internal Rate of Return (IRR)]

Tabulated (critical) value of  $X^2$  for 1 d. f. at 5% level of significance is 3.841 and calculated value of  $X^2 = 1.06$ . Hence, the calculated value of chi-square is less than the tabulated value, it is not significant. Thus, the difference between observed and expected frequencies is not significant and can be attributed to give chance to fluctuations. It means there are significant difference between Actual (sample) & pre-determined (standard) IRR.

### FINDINGS OF THE STUDY

According to the capital employed SNFBPL is large manufacturing company in Nepal whereas BPDWU is a very small pure drinking water manufacturing company.

The NCO of Sunrise Nepal Food & Beverages Pvt. Ltd. is 247,127,526.82. Whereas the NCO of Birgunj Pure Drinking

Water Udyog is 3,863,453.65. The NCO also shows the SNFBPL is the largest manufacturing company.

The cost of capital of BPDWU is 13% whereas the cost of capital of the SNFBPL is 11.26%. The cost of capital of SNFBPL is lower than BPDWU. It is because of SNFBPL is a levered firm where as BPDWU is unlevered firm. It means, the capital structure of BPDWU is debt free.

The PBP of Sunrise Nepal Food & Beverage Pvt. Ltd. is 10.0343 Years whereas the PBP of Birgunj Pure Drinking Water Udyog is 6.6338 years. The PBP of SNFBPL is higher than PBP of BPDWU. It means SNFBPL need more time to recover their investment. After the analysis of PBP, SNFBPL is risky organization than BPDWU.

The NPV of Sunrise Nepal Food & Beverage Pvt. Ltd. Is 55,645,151.27 whereas the NPV of Birgunj Pure Drinking Water Udyog is 806,152.65. The NPV of SNFBPL is 69.0255 times higher than NPV of BPDWU, which is more than the NCO. It means SNFBPL expected return is better than BPDWU.

The IRR of Sunrise Nepal Food & Beverage Pvt. Ltd. is 12.7969% whereas the IRR of Birgunj Pure Drinking Water Udyog is 15.1567%. The IRR of SNFBPL is less than IRR of BPDWU. It means BPDWU expected return is better than SNFBPL.

The PI of Sunrise Nepal Food & Beverage Pvt. Ltd. is 1.2252 times whereas the PI of Birgunj Pure Drinking Water Udyog is 1.2087 times. The PI of SNFBPL is more than IRR of BPDWU. It means SNFBPL expected return is better than BPDWU.

The ARR of Sunrise Nepal Food & Beverage Pvt. Ltd. is 46.371% whereas the ARR of Birgunj Pure Drinking Water Udyog is 20.92%. The ARR of SNFBPL is more than IRR of BPDWU. It means SNFBPL expected return is better than BPDWU.

With a view point of NPV, PI and ARR, the expected return of SNFBPL seems to be sound in comparison to BPDWU.

## Recommendations

Following recommendations are given:

### 1. Recommendation to Management of SNFBPL

- It is found that their investment is large and recommended to increase the life of the project.
- It is found that the cost of capital is on average and recommended to try to decrease the overall cost of capital.

- It is found that the investment recovery period is large (i.e. 10-11 years) and recommended to try to decrease the investment recovery period (i.e. Payback period).
- It is found that the cash return is low and recommended to try to increase it (i.e. Net present value). All is possible when the sales volume will increase.
- It is found that expected IRR is more than Overall cost of capital which is green signal for the organization but it is recommended to try to increase the IRR by increasing the existing level of sales.
- It is found that the expected profit after tax is in increasing trend. It is good signal for the company but need to increase the size of net income.
- It is found that the existing net worth is poor and is in increasing trend in near future. So, it is recommended to increase the existing sales and try to increase the project life.

### 2. Recommendation to Proprietor of BPWU

- It is found that the investment is small and recommended to increase it and the life of the project.
- It is found that the cost of capital is high and recommended to try to decrease the overall cost of capital by using debt capital.
- It is found that the investment recovery period is large (i.e. 6-7 years) and recommended to try to decrease the investment recovery period (i.e. Payback period).
- It is found that the cash return is low and recommended to try to increase it (i.e. Net present value). The all is possible while your sales volume will increase.
- It is found that expected IRR is more than Overall cost of capital which is green signal for the organization but it is recommended to try to increase the IRR by increasing the existing level of sales.
- It is found that the expected profit after tax is in increasing trend. It is good signal for the company but need to increase the size of net income.
- It is found that the existing net worth is poor and is in increasing trend in near future. So, it is recommended to increase the existing sales and try to increase the project life.

### 3. Recommendation to User of Capital Budgeting

- It is recommended that be careful while estimating the life of project. Because a project is a combination of multiple plant & equipment. While estimating life of

project minimum life of plant & equipment will be considered.

- It is recommended to use different quotations of the plant & equipment and cost regarding construction and consult to the technical persons for layout of the project while estimating Initial Investment (NCO) of the project.
- It is recommended to use Trend Analysis & Competitors Analysis while estimating the Cash Inflow of the Project.
- It is recommended to use International Accounting Standard & Nepalese Accounting Standard (NAS) while determining the Cash flow of the project.
- It is recommended to use the discounted as well as non-discounted techniques while evaluating cash flow of the project.
- It is recommended to use the basic assumptions of capital budgeting while making decision.
- It is recommended to consider Income Tax Act and Financial Act of such country.
- It is recommended use Net Present Value (NPV) as a major decision making tools.
- It is recommended to use overall cost of capital as a discount rate.
- It is recommended to use methods of charging depreciation as per the Income Tax Act of such country.

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