PROJECT MANAGEMENT, PAPER CODE-206, MBA II, TOPIC-FINANCIAL ANALYSIS, UNIT-IV

FINANCIAL ANALYSIS

Implementing projects, involving large expenditure is a strategic decision - it is both long term and not easily reversible. Wrong decision can land the company into major problems. At the same, without taking up projects for expansion and upgradation, companies cannot maintain and improve their profitability. These projects involving large capital outlays have to be appraised from a `private' or financial point of view - this evaluation is from the view point of promoters who may be individuals, corporate, commercial and development institutions, 'development corporations, central or state governments or their agencies. This evaluation is required before these are sanctioned for implementations. Method of evaluation may be the traditional ones - unsophisticated like Average Rate of Return (or Return on Investment) and Payback Period or time-adjusted techniques like Net Present Value, Internal Rate of Return etc

AVERAGE RATE OF RETURN ON INVESTMENT

(ROI)

This is an accounting method. There is no agreement on the definition and a number of alternative methods of calculating it are available. The most common ratio is:

$$\frac{\text{Average Annual Profit after taxes}}{\text{Average Investment over the project life}} \times 100$$

Average Annual Profit after taxes is calculated by adding up the after-tax profits

for each year of project life and dividing it by the no. of years of estimated useful life (for annuities, after-tax profit is equal to one year's profit).

• Average Investment over the project file is computed by dividing the net investment by two (straight line depreciation is assumed) and adding the salvage value that would be received at the end of the projected life (since it remains invested throughout) and full amount of working capital required.

PAY BACK PERIOD (PB)

Pay Back Period (PB) is a traditional method which is simple and most widely used for project evaluation. It is a measure, in terms of time, it will take to recover from proposed operations, the initial cash investment, which normally disregards the salvage value of the equipment at the end of its useful life.

Pay Back Period (PB) = Initial Investment

Divided by

Constant Annual Cash Flow (CFAT

Usually, the cash flows every year are not equal as they vary from year to year, in which case, the calculations are: Pay Back Period (PB) = Original Cost of Acquisition

Cash Flow after Tax (CFAT)

DISCOUNTED CASH FLOW TECHNIQUES

Traditional methods of project evaluation do not take into account the total benefits from the entire life cycle of a project not they consider the time value of money. The techniques described below, discount the cash flows by the cost of capital – a discounting factor for adjusting time value of money

NET PRESENT VALUE (NPV)

Net present value (NPV) is the difference between the present value of cash inflows and the present value of cash outflows over a period of time. NPV is used in capital budgeting and investment planning to analyse the profitability of a projected investment or project.

$$\mathbf{NPV=\sum^{N}_{t=1}\frac{Rt}{(I+t)^{t}}}$$

where:

Rt =Net cash inflow-outflows during a single period t

i=Discount rate or return that could be earned in alternative investments

t=Number of timer periods.

INTERNAL RATE OF RETURN (IRR)

IRR method is known by many names - yield on investment method, marginal efficiency of capital method, marginal productivity of capital method, rate of return method, time adjusted rate of return method etc. It also takes into account time value of money by discounting cash Inflows and Cash Outflows. This method is best described as the rate of return the project earns from itself because, it is that discounting factor (R) which equals the present value of the cash flow (CFAT) with the aggregate present value of the net cash outflows of the project i.e. this rate of discounting which gives zero NPV.

PROFITABILITY PROJECTIONS

The traditional and sophisticated discounting methods of project evaluation have been faulted because the financial analysis looks at the capital expenditure proposal in isolation and works out the ROI, PB, NPV or IRR whereas it is more appropriate to work out the impact of expansion proposal on the working results of the company. This would highlight the working results - profit/loss statement without and with the new project.

This is computed as below:

1.Cost of production

2.Total administrative expenses

- Administrative Expenses
- Administrative salaries
- Remuneration etc. to directors
- Professional and consultants' fees
- Light, postage, Telegrams, Telephones, office stationery etc.

- Insurance Taxes etc.

3. Total sales expenses

4. Royalty, know-how payable

5. Total cost of production (1 + 2 + 3 + 3 + 4)

6. Expected sales

7. Gross profit before interest and financial expenses (6 - 5)

8. Total financial expenses

9. 9. Depreciation charges

10. Operating profits (7 - 8 - 9)

11. Other incomes

12. Preliminary expenses written off

13. Profit before Taxation (10 + 1 - 12)

14. Provision for Taxation

15. Profit after Tax (14 - 13)

Less Dividend on preference Capital @

Less Dividend on Equity Capital @

16. Retained profits

Add Depreciation charges

Preliminary Expends written off

17. Net Cash Accruals (16 + 9 + 12)

These calculations are done for several years to cover 3 - 5 years of operations after commencement of commercial production.

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