

K.J. Somaiya Institute of Management Studies & Research

Course: PGDM (RM) – VI Tri. End Term Examination

Sub: Project Management (Finance Part)

Date of Exam: 03rd April, 2018

Time: 90 Min.

Marks: 25

Note: 1. Use dataset provided.

2. Write down findings and interpretation on answer sheet provided.

Case Study

Rath is perplexed with the plethora of data on his desk. His boss, the CFO of his company JK Enterprises, Mr. Tom, had sent him all the details the previous day and wanted him to be ready with a detailed analysis by the end of week. The perfectionist that he is, Tom expects the draft free from conceptual and calculation error. After his approval, the final paper is to be readied for presentation to the board early next week. Rath is aware that given the high expectations, he must anticipated difficult questions and makes the analysis as comprehensive as possible.

JK Enterprises is contemplating a new project in Bhopal. The project involves automatic agriculture production and selling it in packaged quantities either through wholesale or retail. Preliminary surveys show enormous scope for this business.

The company will be required to have an investment of Rs.200 lakhs. It is generally expected that the legal and environmental framework will change over the next five years and hence the horizon of the project is five years. In case of abandonment after five years, JK Enterprises will be able to recover Rs.40 lakhs from the total of Rs.200 lakhs spent as outlay. A loan of Rs.50 lakhs will be received at the beginning for which the pretax cost of debt will be 11.50%. All the other requirements of capital will be met out of by issuing equity shares.

The turnover expected is Rs.100 lakhs (100000 units @ Rs.100 per unit) in the first year with growth of 20% for year 2, 3 and 4. The turnover for year 5 can be assumed to be the same as that for year 4.

Expenses will be of two types: fixed and variable. Fixed expenses will be of the order of Rs. 12 lakhs per year, and variable expenses will constitute 40% of the turnover each year.

Equipment will be depreciated at the rate of 10% as per WDV method. Tax rate is 30%. Cost of capital is 21%.

Rath Savera wants to do the analysis of the following situations:

1. Some consultants have informed the company that NPV is sensitive to few variables mention below with increase/ decrease of 10%:
 - a. Sales volume (first year).
 - b. Selling Price (first year).
 - c. Investment outlay.
 - d. Fixed cost.

Rath wants to know the NPV if these variable changes and which variable is more sensitive to NPV.

2. Consultants also informed that sales growth may range from 18% to 23% and variable cost proportion may also range from 38% to 43%. Rath wants to calculate sensitivity of change in these two variables on NPV and IRR.

3. Another agency has given an analysis of the company that there are only three possible scenarios-the one that is currently projected, one in which key variables changes favorably and one in which the key variables changes unfavorably. Run the scenario analysis and generate the scenario summery sheet also calculate expected NPV and Standard deviation and recommend whether to accept project or not. Details of variables are as follow:

Inputs	Base Case	Favorable	Unfavorable
Probability	50%	25%	25%
Initial Investment (Lakhs)	200	190	214
Expected life	5	5	5
Sales volume (Lakhs)	100000	105000	93000
Selling Price Per Unit	100	105	93
Variable cost proportion	40%	35%	45%
Fixed Cost (Lakhs)	12	11.4	12.84
Sales growth	20%	25%	15%
Cost of Capital	21%	15%	24%
Depreciation	10%	10%	10%
Salvage Value (Lakhs)	40	50	30
Tax	30%	25%	35%

4. Assume that sales price form a normal distribution with mean of Rs.100 lakh and standard deviation of Rs.2 lakh; variable costs form a normal distribution with mean of 22.50% and a standard deviation of 2%; and fixed cost form a uniform distribution with minimum and maximum value if Rs.11 lakhs and Rs.13 lakhs. Run simulation on NPV for 100 run changes and suggest whether to accept or reject the project.