

***ADVANCED CAPITAL
BUDGETING DECISIONS***

CLASS 7-HW-Q17

Topic Risk Adjusted Discount Rate (RADR)

Question 17:

Rohan Pharmaceuticals Ltd is planning to venture into biotech business. The project costs the company Rs 350 crore in the current year and Rs 150 crore in the next year. The expected operating cash in-flows from this project during its life time is as follows:

(Rs. in crore)					
2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
75	120	175	220	150	50

The company likes to use risk adjusted discount rate method for the appraisal of this project. The premium for normal risk of the firm is 3%. Risk free rate is 6%. The extra premium for abnormal risk of the project is 75% of the normal risk premium.

You are required to find the risk adjusted NPV of the project.

ANSWER:

$$\begin{aligned}
 R_f &= 6\% & \text{extra risk premium (d}_k\text{)} \\
 n &= 3\% & = 75\% \text{ of normal risk premium} \\
 k_c &= 9\% & = 75\% \text{ of } 3 \\
 d_k &= 2.25\% & = 2.25\% \\
 \text{RADR} &= 11.25\% \\
 \rightarrow \text{calculation of Risk Adjusted NPV:-} \\
 \text{NPV} &= -350 - \frac{150}{(1.1125)} + \frac{75}{(1.1125)^2} + \frac{120}{(1.1125)^3} + \frac{175}{(1.1125)^4} \\
 &\quad + \frac{220}{(1.1125)^5} + \frac{150}{(1.1125)^6} + \frac{50}{(1.1125)^7} \\
 &= -350 - 134.84 + 60.599 + 87.16 + 114.24 + \\
 &\quad + 129.096 + 79.125 + 23.71 \\
 \therefore \text{NPV} &= 9.09
 \end{aligned}$$