Project management

[Business](#)

Teacher's Project Management Answer to Q1. The NPV of the both projects are negative; that is why, they do not meet the minimum standard for Big LU investments.

Answer to Q2. The payback period of Alpha = 8. 0 years; and the payback period of Zeta = 7. 1 years. The rate of return of Alpha = 12. 50%; and the rate of return of Zeta= 14%.

Answer to Q3. NPV of the project Alpha = -$64, 343, 913; and NPV of the project Zeta = -$120, 162, 957.

Answer to Q4. The formula is NPV = - Initial investment + sum of discounted values of each year net cash flow during the project life. The NPV takes care of; initial investment, cost of capital, and income generated by the project. If two projects are mutually exclusive, then Big Lu should invest on the project with the larger value of NPV.

Answer to Q 5. If two projects are not mutually exclusive, the Big Lu rejects the project with the negative NPV, and accepts the one with the positive NPV.

Answer to Q6. The concept breakeven point implies when NPV = 0. For project Alpha, it means when the sum of all discounted values of annual income of each year ($25, 000, 000) becomes equal to $200, 000, 000. The equation for break-even point with the consideration of NPV is expressed as, 0 = -$200, 000, 000 + (Sum of all PV Factors) x $25, 000, 000 (" Definition of Net Present Value"). From this equation, Sum of all PV Factors = 200, 000, 000 / 25, 000, 000 = 8. The PV Factor for each year is calculated using formula, $1/(1+r)^n$. In this formula, r = 13%, and n = number of years, such as 1, 2, 3 ...., and so on. The sum of PV factors at r = 13% for 70 years is equal to 7. 69, and NPV = -7, 721, 304. It can be concluded that Break-even

point with NPV for Alpha project is much longer than 70 years. The sum of all PV Factors for the project Zeta is calculated, Sum of all PV Factors = 500, 000, 000 / 70, 000, 000 = 7. 1428. The sum of all PV Factors for the yearly return 13% in 25 years is equal to 7. 1695. It is concluded that Break-even points of Zeta project is in between 24 and 25 years.

Answer to Question 7. Big Lu is using NPV criterion that is based on the discounted cash flow concept. It implies that annual income for each year will be discounted to the present value. If the Net Present Value is positive then the investment project is accepted. This is an industry accepted method; that is why Big LU investment criteria is accurate.

Work Cited

" Definition of Net Present Value." investopedia. com. Investopedia, n. d. Web. 09. Dec. 2013. http://www. investopedia. com/terms/n/npv. asp