

Chapter 5:- Comparing alternatives

Case I:- Useful life = study period

→ repeatability assumption

↳ Equivalent Worth Methods:-

• you find PW, or FW, or AW for both alternatives and the larger value is the best alternative

Inconsistent Ranking Problem:-

→ When IRR is higher for an Alt and PW is less for the same

Case 2: Useful life \neq Study period

- Useful life $<$ study period

→ assume a study period \rightarrow n years

Using AW:

$$\text{if } (AW)_{Alt=1} > (AW)_{Alt=2} \quad \text{Alt=1 is preferred}$$

$$\text{Not } AW = (R-D) - CR$$

Using PW:

Same as AW But to find it

$$PW = -P + (R-D)(P/A, i, N) + \overset{\text{first}}{\downarrow} \overset{\text{period.}}{+}$$

→ if periods are 3 then take two

→ if two take one

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i R.R method

$$\cancel{N.P.O} = \cancel{N.A.W}$$

$$i^* \rightarrow (N.A.W)_{AIt_1} = (N.A.W)_{AIt_2}$$

$$i^* \geq M.A.R.R$$