Lesson 4 – Simple Cashflow Analysis Techniques

Lesson Objectives

- Use break-even cashflow analysis to assess the value of a project
- Use cost-benefit analysis on simple cashflows to assess the value of a project

Payback Period

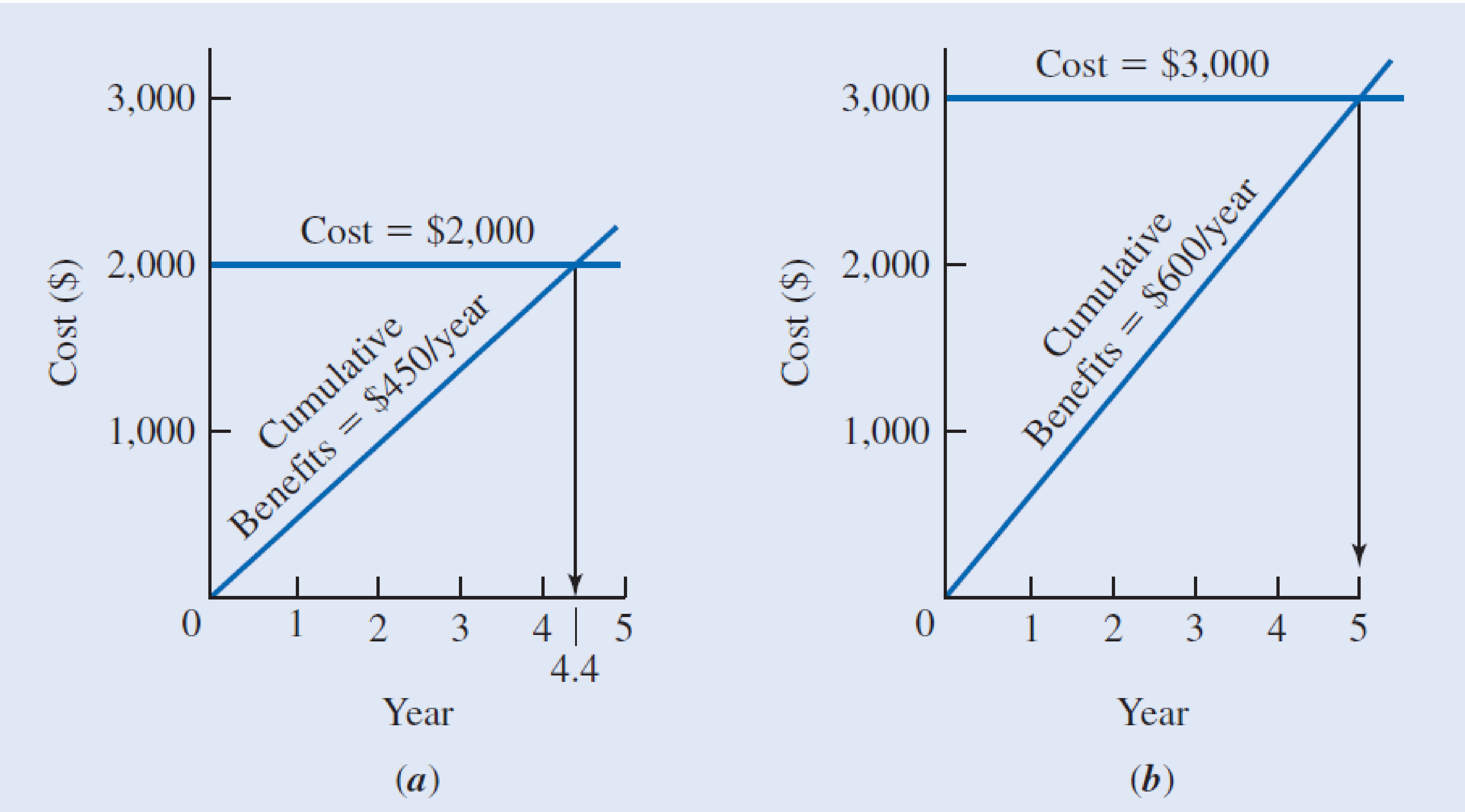
- Payback period is the period of time required for the profit or other benefits of a project to equal the cost.

    Note: Interest Rate is NOT considered.

ie. If a $1000 investment today generates $500 of benefits per year, we say its payback period is 1000/500 = 2 years.

1. All costs/benefits/savings are included
2. All economic consequences beyond the payback are ignored
3. Due to its approximate nature, it may not select the most valuable alternative

Payback Period: Example 9-9



Payback period example 2

Year	***Cash Flow: Project A***	***Cash Flow: Project B***
0	–$15,000	–$15,000
1	$1000	$3000
2	$2000	$3000
3	$3000	$3000
4	$4000	$3000
5	$5000	$3000
6	$6000	$3000
7	$7000	$3000
8	$8000	$3000

2.) Benefit–Cost Ratio Analysis

- An alternative is acceptable when:
  - Net Value of benefits – Net Value of costs $\geq$ 0

  OR
  - Net Value of benefits / Net Value of costs $\geq$ 1

Benefit – Cost Example

You run a small ice-cream parlour in a park in Port Moody, BC, and are considering mailing coupons to local homes in an effort to drive spring sales.

You estimate the cost of the mailing will be $2,500, and will reach 5,000 households. Based on historical data, roughly 5% of these kind of coupons get redeemed, with an average profit per sale of $4.50. Based on the benefit to cost-ratio, is this mailing worth doing?

Benefit – Cost Example

Benefits: 5000 households x 5% redemption rate x $4.50 per redemption = $1,125

Costs: $2,500

Benefit/cost ratio: $1,125/$2,500 = 0.45

What un-accounted for benefits might come from this mailing that could make it worth doing regardless?

What un-accounted for costs could make it worse?

Summary

- Simple models, don’t capture important factors
  - Payback period doesn’t include benefits post-payback
  - Neither method considers interest
- Common in business environment (payback period) and government (benefit/cost ratio)
- Useful as gate checks
  - Sets a minimum financial viability before doing more sophisticated analysis