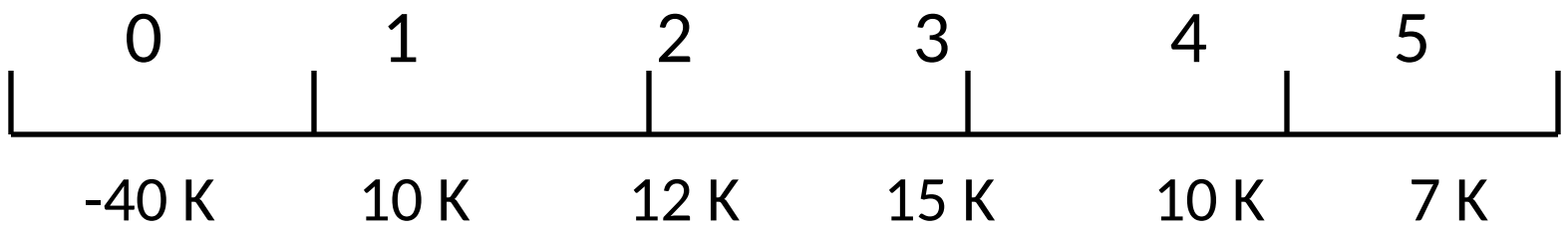
CAPITAL BUDGETING-INTRODUCTION

Capital budgeting, or **investment appraisal**, is the planning process used to determine whether an organizations long term investments such as new machinery, replacement of machinery, new plants, new products, and research development projects are worth the funding of cash through the firm's capitalization structure (debt, equity or retained earnings). It is the process of allocating resources for major capital, or investment, expenditures.One of the primary goals of capital budgeting investments is to

CAPITAL BUDGETING-METHODS

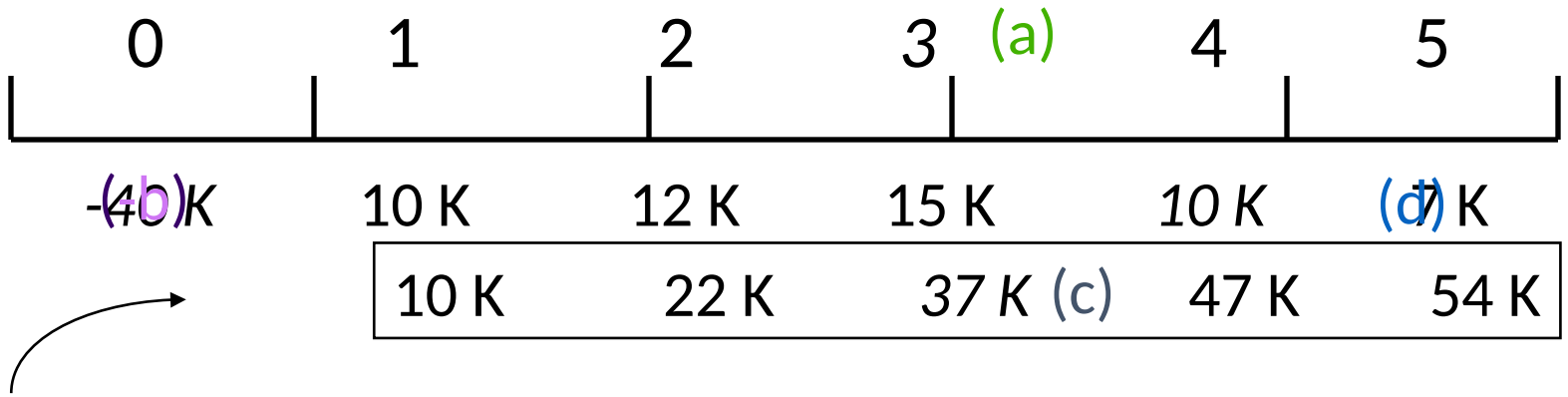
- Payback Period (PBP)
- Internal Rate of Return (IRR)
- Net Present Value (NPV)
- Profitability Index (PI)

Payback Period (PBP)



PBP is the period of time required for the cumulative expected cash flows from an investment project to equal the initial cash outflow.

PAYBACK FORMULA



PBP = a + (b - c) / d = 3 +

(40 - 37) / 10 = 3 + (3) / 10

= 3.3 Years

PBP Strengths and Weaknesses

Strengths:

- Easy to use and understand
- Can be used as a measure of liquidity
- Easier to forecast ST than LT flows

Weaknesses:

- Does not account for TVM
- Does not consider cash flows beyond the PBP
- Cutoff period is subjective

Internal Rate of Return (IRR)

IRR is the discount rate that equates the present value of the future net cash flows from an investment project with the project's initial cash outflow.

$$ICO = \frac{CF_1}{(1+IRR)^1} + \frac{CF_2}{(1+IRR)^2} + \ldots + \frac{CF_n}{(1+IRR)^n}$$

IRR Acceptance Criterion

The management of *Basket Wonders* has determined that the hurdle rate is 13% for projects of this type.

Should this project be accepted?

No! The firm will receive 11.57% for each dollar invested in this project at a cost of 13%. [IRR < Hurdle Rate]

IRR Strengths and Weaknesses

Strengths:

- Accounts for TVM
- Considers all cash flows
- Less subjectivity

Weaknesses:

- Assumes all cash flows reinvested at the IRR
- Difficulties with project rankings and Multiple IRRs