PROJECT PLANNING & CONTROL

Lesson 6: Project Finance

by
Khairul Firdaus Anuar
Faculty of Industrial Management
khairulfirdaus@ump.edu.my

Chapter Description

- Aims
  - The aim of this chapter to expose students to understanding the project finance management

- Expected Outcomes

  At the conclusion of this chapter, the students should be able to:
  - Identify the source of finance
  - Apply and define the project spend plan
  - Demonstrate break-even and payback period

- References
  - Erik W. Larson & Clifford F. (2014). Project Management: The Managerial Process (6th Ed.). McGraw-Hill Education, New York.

Content of LESSON 6
PROJECT FINANCE

- 6.1 Source of Finance
- 6.2 Defining the Project Spend Plan
- 6.3 Break-even and Payback

What is Project in *financial term*?

High operating margins.

Low to medium return on capital.

Limited Life.

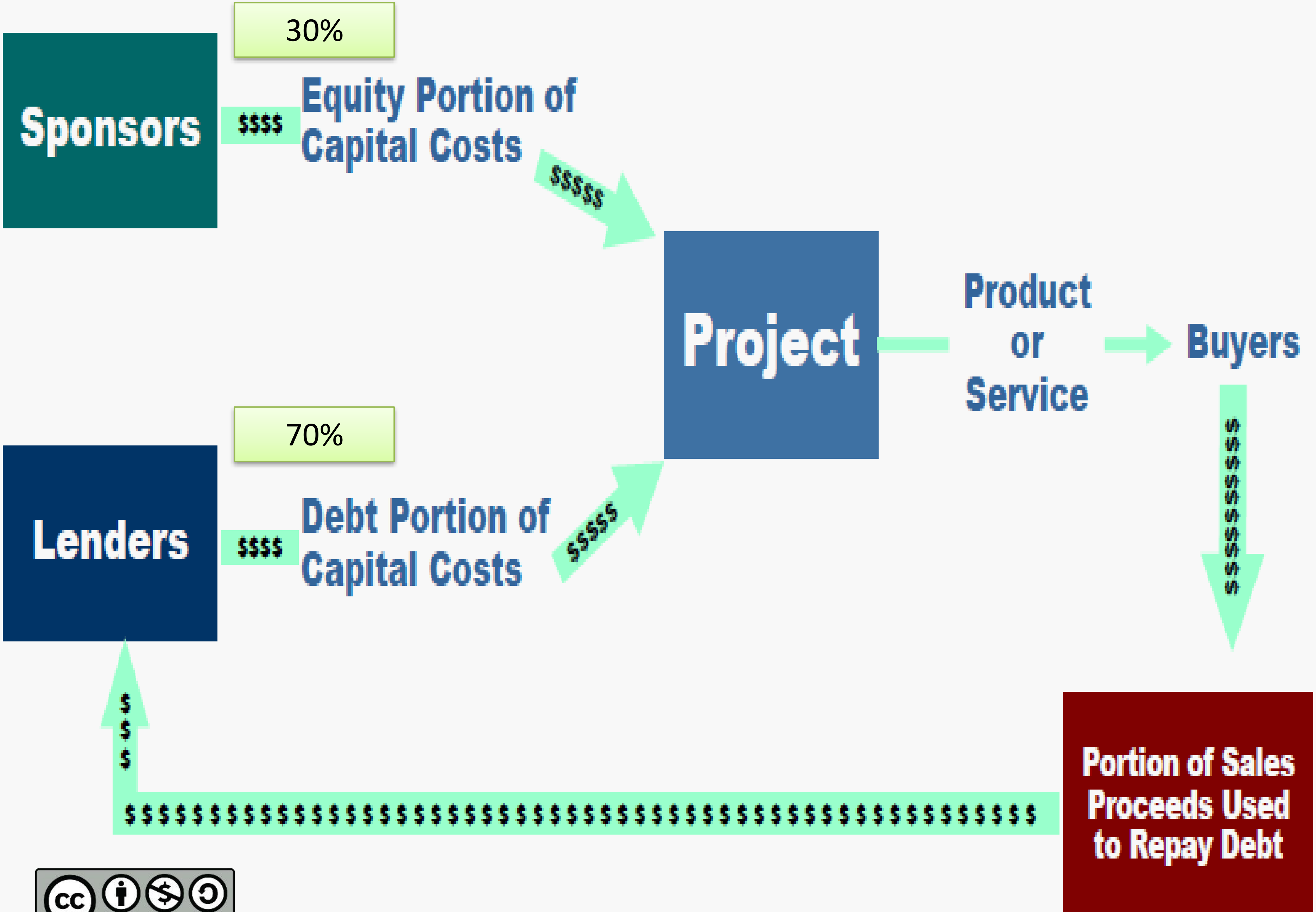
Significant free cash flows.

Focus in nature. Diversification is limited

Definition

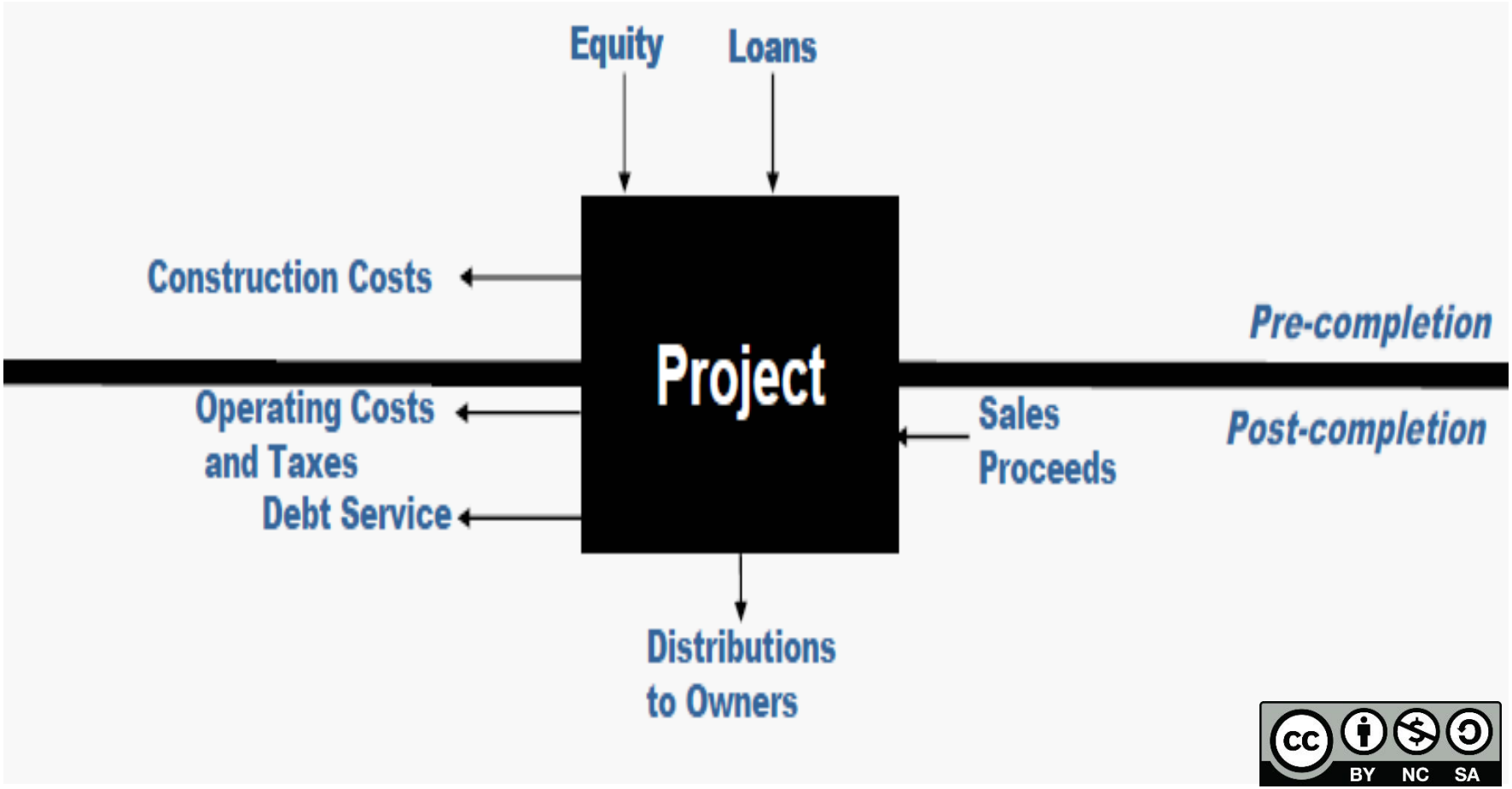
- *Project Finance involves a **corporate sponsor** investing in and owning a **single purpose**, industrial asset through a legally **independent** entity financed with **non-recourse debt**.*

Adapted from 1. B. C. Esty and A. Sesia Jr., "An Overview of Project Finance-2004 Update", *Harvard Business Review, 9-205-065.*


Sponsors
30%
$$$$
Equity Portion of Capital Costs
$$$$$
Project
Product or Service
Buyers
Lenders
70%
$$$$
Debt Portion of Capital Costs
$$$$$
Portion of Sales Proceeds Used to Repay Debt

What you need to know..

- Project finance is **cash flow** based credit



Advantages Project Finance

- Eliminate or reduce Avoid any restrictions or agreements
- Avoid any negative impact of a project on the credit standing of the sponsors.
- Obtain better financial conditions
- Allow the lenders to evaluate the project on a segregated and stand-alone basis.
- Obtain a better tax treatment for the benefit of the project, the sponsors or both.

Disadvantages of Project Finance

- Often takes longer to structure than equivalent size corporate finance.
- Higher transaction costs due to creation of an independent entity.
- Can be up to 60bp Project debt is substantially more expensive (50-400 basis points) due to its non-recourse nature.
- Extensive contracting restricts managerial decision making.
- Project finance requires greater disclosure of proprietary information and strategic deals.

Sources of Finance

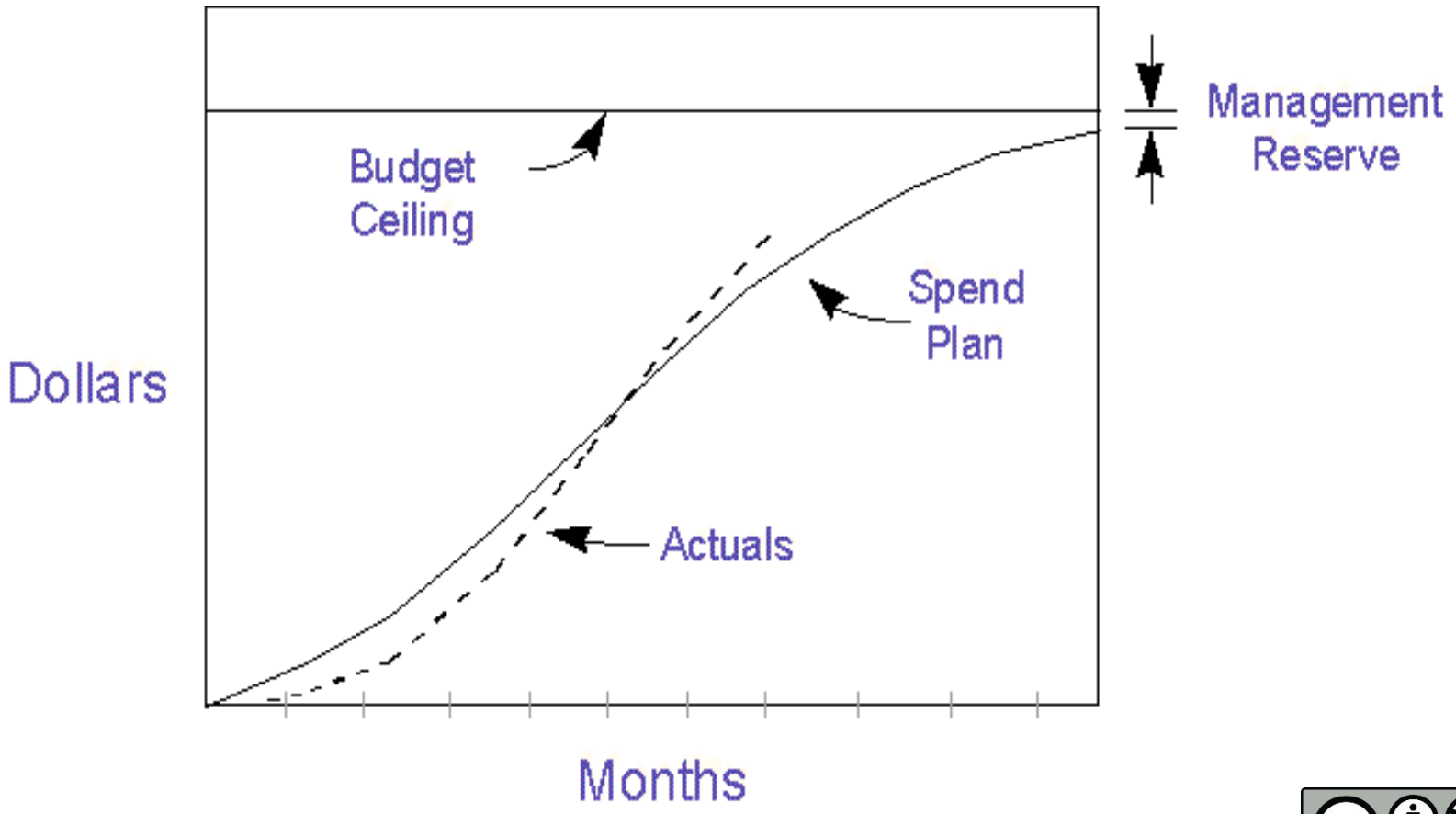
- Two types : internally or externally

Internal	External
Owner's investment	Bank Loan or Overdraft
Retained profits	Additional Partners
Sale of stock	Leasing
Sale of fixed assets	Hire purchase
Debt collection	Government Grants

Defining Project Spend Plan

- The most basic cost control technique is to develop a project budget and then track spending against it.
- On a small project, this can be as simple as having a target cost goal for the total project.
- **Warn yourself** if what you spend exceeds the percent completion estimated for the project

How to do Spend Plan Tracking?



How to do Spend Plan Tracking?

1) Develop a weekly or monthly cumulative **budget spend plan** and then track actual costs against the plan

2) You can see differences between actual spending and the spend plan.

3) This technique is **useful** for executive briefings, especially where you want to match expenditures to a funding stream.

Creating Project Budget

- Project costs and project budgets are two different things.
- Project Budget is used to determine whether the project is on track.

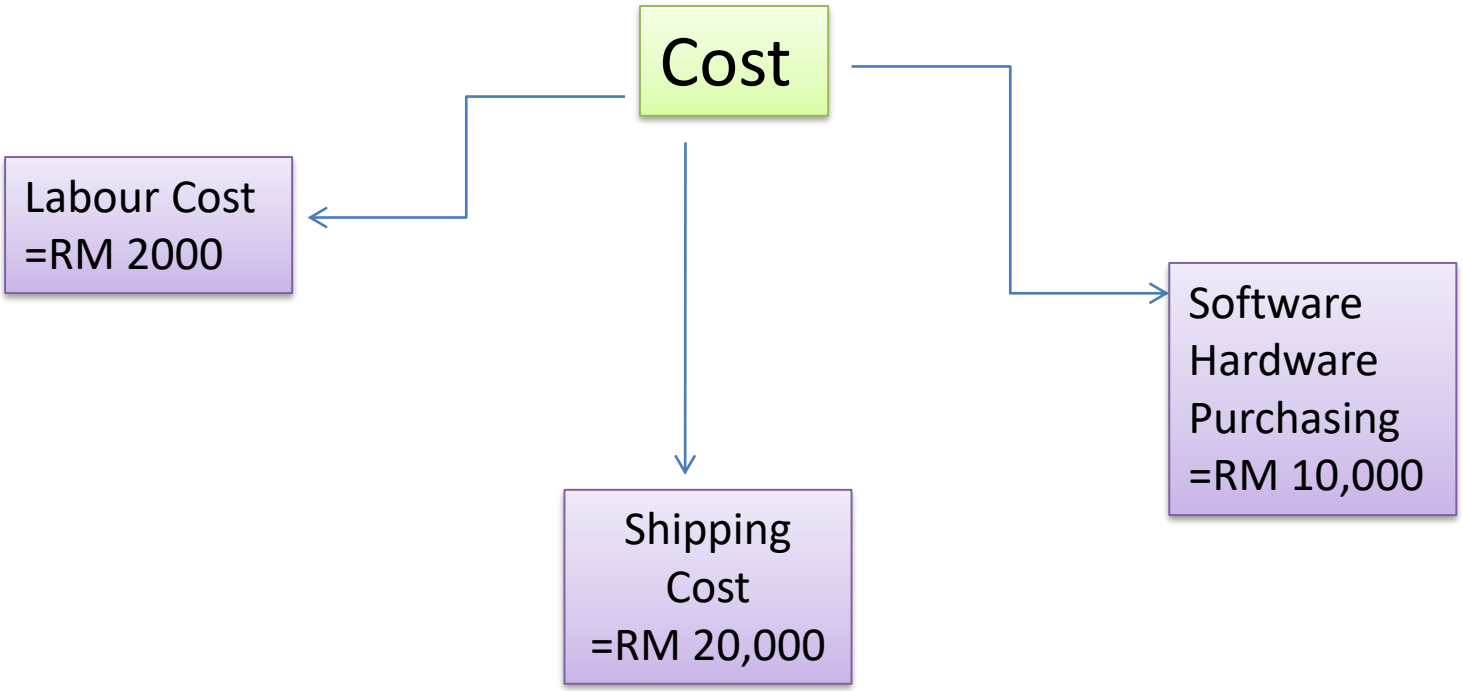
How to create budget?

1) First , identify your cost

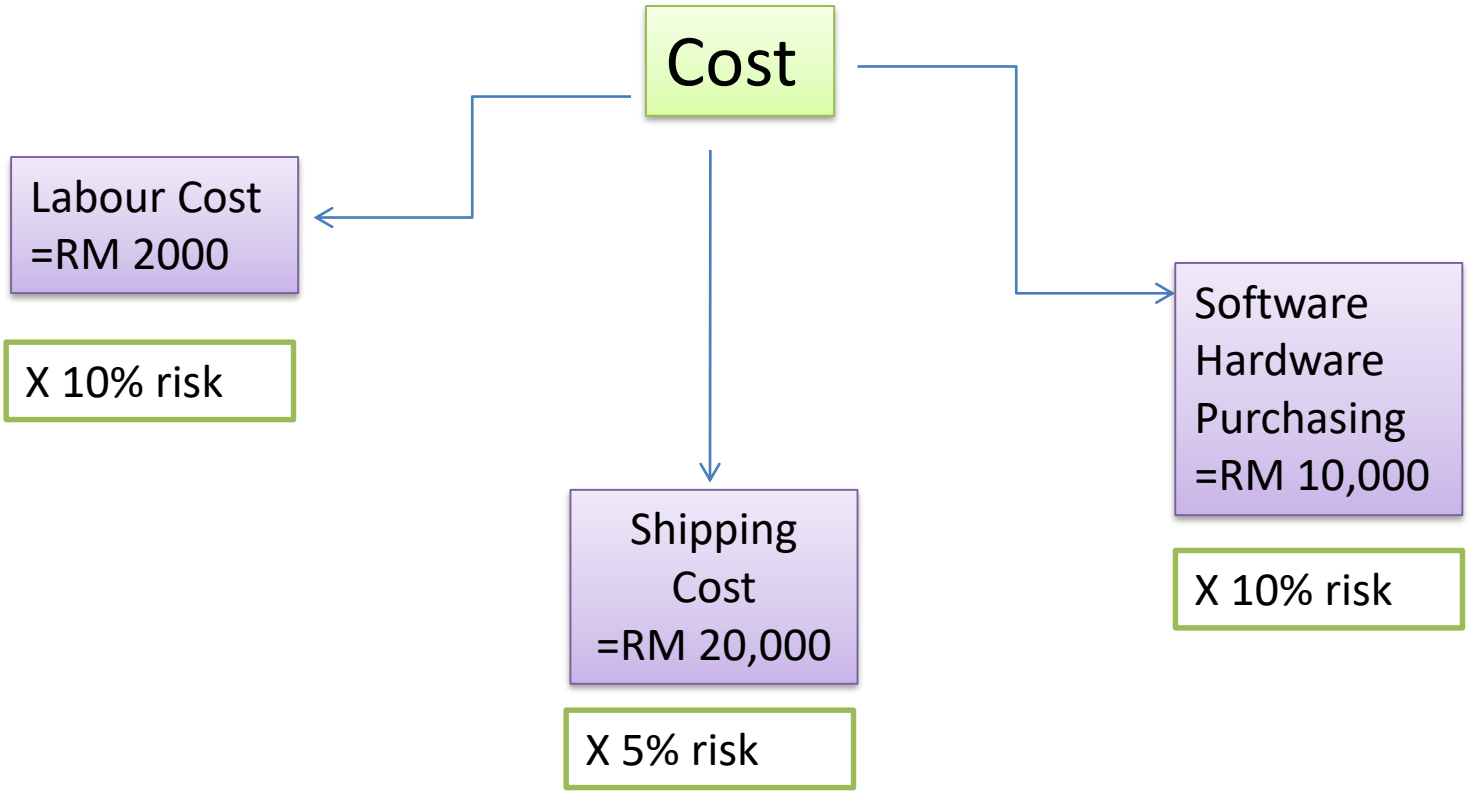
2) Identify your risk and allocate percentage of risk it may affect the whole project.

3) Your budget is then the total cost plus the total risk percentage of that cost.

How to create budget for a computer business?



How to create budget for a computer business?



So, how much you should have your budget?

Extra amount you should have:

Labour (RM 2,000 x 10%) + Shipping (RM20,000 x 5%) + Software Hardware Purchasing (10,000 x 10%)

= RM 200 + RM1,000+ RM 1,000

= RM 2,200.

So, your budget is : Cost + RM 2,200

=RM 32,000+RM 2,200 =**RM 34,200**.

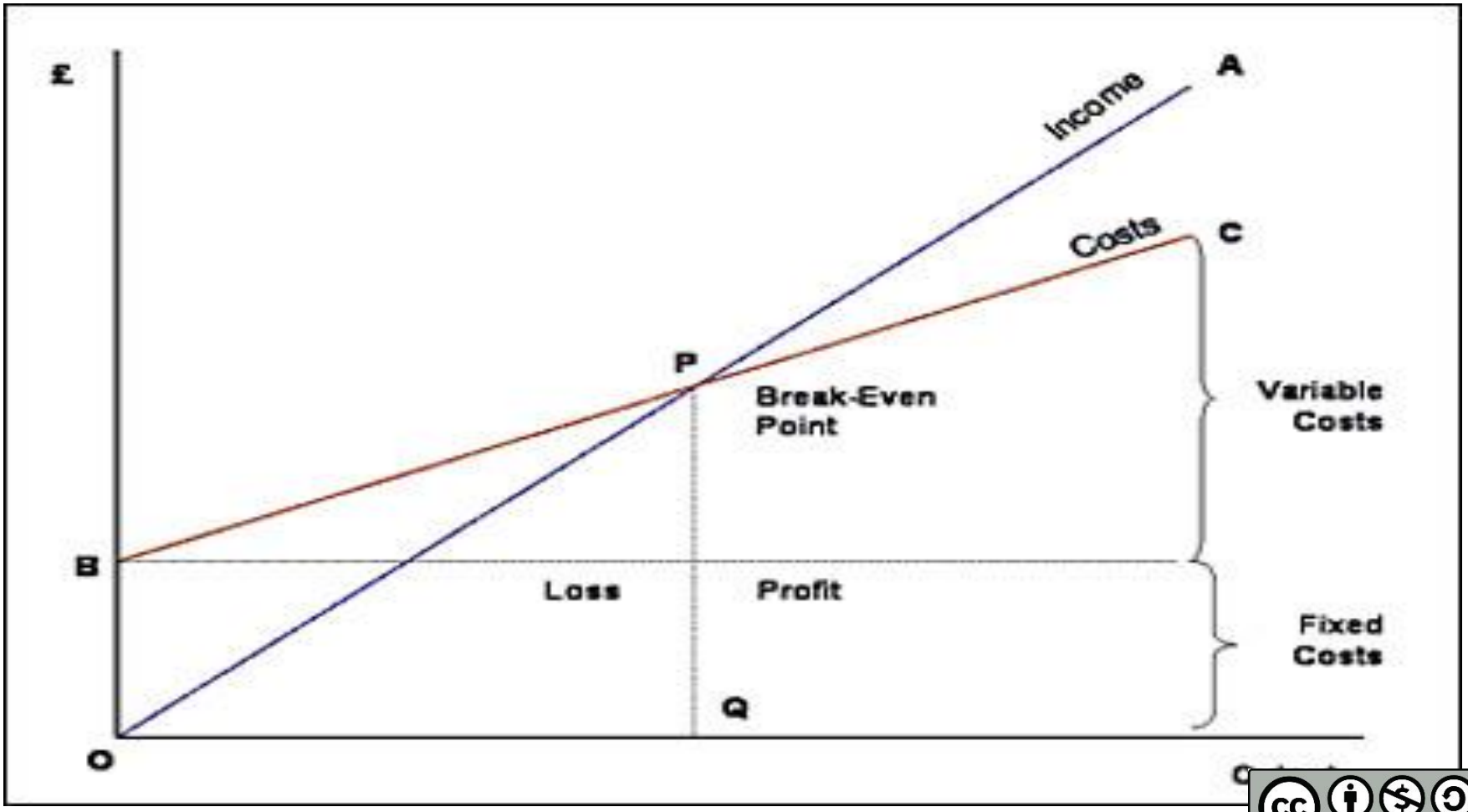
The theory behind the breakeven analysis

- Made up of four basic concepts:
  - ***Fixed costs-*** costs that do not change
  - ***Variable costs-*** costs that rise in propitiation to sales
  - ***Revenue***- the total income received
  - ***Profit***- the money you have after subtracting fixed and variable cost from revenue

6.2 Breakeven-and Payback

- Line graph used in breakeven analysis to estimate when the **total sales revenue will equal total costs.**
- **The point where loss will end and profit will begin to accumulate.**
- The Break Even Point is the volume of sales you need to cover your costs and no profit or loss is made—in other words, you break even.

Breakeven-and Payback



Income /revenue

- Income /revenue = Sales Volume x price/unit

Example: Selling Price of 1 nasi kerabu = RM 10.00. How much is your income if you sell 10 nasi kerabu?

Income for 10 nasi kerabu?

=10 x RM10.00

=RM 100.00

Income /revenue

1 unit selling price =RM 10

Selling units	40	80	120	200
Revenue(RM)	400	800	1200	2000

Exercise:

- 1 unit selling Price = RM 20

Selling units	10	20	30	40
Revenue(RM)	?	?	?	?

Cost

Cost = Fixed Cost + Variable Cost.

- Fixed Cost continue regardless of how much you sell or don't sell
- Variable costs are directly related to the volume of sales

Cost

Selling units	40	80	120	200
Fixed cost(RM)	400	400	400	400
Variable cost(RM6/unit)	240	480	720	1200
Total cost(RM)	640	880	1,120	1,600

Profit

Profit= Revenue-cost

How much is your profit if your revenue is RM 200, and your total cost is RM 100?

Breakeven Point: Revenue is equal with Total Cost.

1 unit selling Price = RM 10

Selling units	40	80	100	120	200
Revenue(RM)	400	800	1000	1200	2000
Fixed cost(RM)	400	400	400	400	400
Variable cost(RM6/unit)	240	480	600	720	1200
Total cost(RM)	640	880	1000	1,120	1,600

Where is the breakeven point?

Payback Period

- Time needed to recover project investment costs.
- The length of time it will take to earn back the money invested in a project.

Payback Period

Thus, if a project cost RM100,000 and was expected to generate RM28,000 annually, the payback period would be:

100,000 / 28,000 = 3.57 years

Payback Period

However, if the annual revenue not the same, you have to use this method:

Revenue	Total	Cum. total
Year 1	RM19,000	RM19,000
Year 2	RM25,000	RM44,000
Year 3	RM30,000	RM74,000
Year 4	RM30,000	RM104,000
Year 5	RM30,000	RM134,000

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