The Use of Money in a Business

- Businesses use money ***(capital)*** to make more!
- There are 3 ways businesses can spend their money:
  - **Invest in fixed assets**
    - Fixed assets = things that the business buys that it intends to keep. E.g. machinery
  - **Buy raw materials**
    - Raw materials =things that the business buys that it intends to resell. These will be used in the **working capital cycle**
  - **Pay overheads**
    - Overheads = fixed or indirect costs

Investment

- **"Investment"** is expenditure on capital goods - i.e. goods that will be used in the production process

- So firms invest whenever they buy fixed assets

- Whether a firm decides to invest will depend upon:
  - whether the investment is worthwhile (**return on investment**)
  - whether the firm is optimistic about the future
    - this may be influenced by economic factors such as inflation or interest rates

Investment Appraisal

- Any investment decision involves risk, because it deals with the future
- Firms are likely to have a number of alternatives to choose from
- Investment appraisal techniques can help them to do choose the best option
- We must look at 2 methods of investment appraisal:
  - **1) The Payback Method**
  - **2) The Average Rate of Return**

1) The Payback Method

- The simplest method of investment appraisal
- This measures how quickly the returns from the investment cover the cost of the investment
- A firm will calculate the payback period of a project
  - If it is acceptable then the project will be undertaken
- If there is more than one possible project, then the one with the shortest payback period will be selected

An Example of Payback

- A company is considering 1 of the 2 projects outlined below

Year	Project A	Project B
0	- £40,000	- £40,000
1	£20,000	£40,000
2	£30,000	£30,000
3	£40,000	£20,000
Payback	1 Year 8 Months	1 Year

- Therefore project B would be chosen
- Note that the income is assumed to be spread equally over the 12 month period

Advantages of Payback

- It is extremely simple
- It is useful where technology changes rapidly
  - cost of machinery is recovered before new model comes out.
- Helps prevent cash flow problems - since money will be recovered as quickly as possible

Disadvantages of Payback

- Cash earned after the payback method is ignored: e.g.

Project	Initial Cost	Expected Earnings (Years)			
		1	2	3	4
A	£7000	£5000	£2000	£1000	£500
B	£7000	£3500	£3500	£0	£0

Here projects A & B are equal according to the payback method, yet project A is more profit

- It does not account for the real value of money: e.g.

Project	Initial Cost	Expected Earnings (Years)		
		1	2	3
C	£10000	£7000	£2000	£1000
D	£10000	£1000	£2000	£7000

Here the payback method cannot distinguish between the 2 projects - however £7000 in year 1 is worth more than £7000 in year 3 because of inflation

The Average Rate of Return (ARR)

- This method measures the net return each year as a percentage of the initial cost of the investment
- It is calculated using the formula:

$$\text{ARR (\%)} = \frac{\text{Net Return (Profit) Per Annum}}{\text{Capital Outlay (Cost)}} \text{ x } 100$$

- If the ARR is acceptable then the project will be undertaken
- If there is more than one possible project, then the one with the highest ARR will be selected

An Example of ARR

- A business is considering 1 of the 2 investment projects outlined below:

	Project A (£)	Project B (£)
Initial Cost	10,000	20,000
Return in Year 1	4,000	9,000
Return in Year 2	5,000	9,000
Return in Year 3	5,000	12,000
Return in Year 4	4,000	10,000
Total Return	18,000	40,000
Total Profit	8,000	20,000
Average Annual Profit	2,000	5,000
ARR (%)	**20**	**25**

- Therefore project B would be chosen

Advantages & Disadvantages of ARR

Advantages

- It clearly shows the profitability of a project
- It allows easy comparison between projects
- The opportunity cost of investment can be taken into account

Disadvantages

- More complex than payback
- It does not take into account the effects of inflation on the value of money over a time period