

# Finance - Investment

## Case study

This section is a case study looking at investment appraisal and the different methods that are available for assessing the merit of an investment project. You first need to read the information given below and then have a look at the [associated questions](#).

**Biz Training Ltd.** is considering buying a new online learning system to enable them to deliver the training they do for their corporate clients. They are looking at three different systems and the cost of each system is as follows:

System A	System B	System C
£120,000	£100,000	£85,000

Each system has a range of functionality, but they do differ quite a bit in what they offer. While they would all do the jobs that Biz Training are looking for, they would need the firm to run their systems very differently and so the expected cash flows from each system are very different. The expected **net cash flows** (income - expenses) for each system are as follows:

Year	System A	System B	System C
1	£65,000	£45,000	£15,000
2	£55,000	£35,000	£30,000
3	£35,000	£35,000	£30,000
4	£15,000	£25,000	£40,000
5	£25,000	£15,000	£45,000

The firm is assuming a discount rate of 10% and this means that they need to apply a discount factor as follows:

<b>Year 1</b>	0.909
<b>Year 2</b>	0.826
<b>Year 3</b>	0.751
<b>Year 4</b>	0.683
<b>Year 5</b>	0.621

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## Case study - Questions

Before trying these questions make sure you have looked at the [case material](#) (it may perhaps be worth printing it out to help with the questions). You can print out this worksheet to fill in all the answers. You could also try the [further task](#) which introduces some added complications.

### Part 1 - Payback period

Use the expected net cash flow data in the [case material](#) to work out the payback period for each of the systems. Work your answer out in years and months if necessary.

**System A:** Payback period \_\_\_\_\_ years \_\_\_\_\_ months

**System B:** Payback period \_\_\_\_\_ years \_\_\_\_\_ months

**System C:** Payback period \_\_\_\_\_ years \_\_\_\_\_ months

### Part 2 - Average rate of return

Use the expected net cash flow data in the [case material](#) to work out the average rate of return for each of the systems. Show your workings below.

Average rate of return - System A \_\_\_\_\_ %

Average rate of return - System B \_\_\_\_\_ %

Average rate of return - System C \_\_\_\_\_ %

### Part 3 - Discounted cash flow

Use the expected net cash flow data in the [case material](#) to work out the net present value for each of the systems. Show your workings below.

We have a given a table for you to use as the basis of your calculations:

Year	System A	Present value - A	System B	Present value - B	System C	Present value - C
1	£65,000		£45,000		£15,000	
2	£55,000		£35,000		£30,000	
3	£35,000		£35,000		£30,000	
4	£15,000		£25,000		£40,000	
5	£25,000		£15,000		£45,000	
	Total present value					
	Less: capital cost	£120,000		£100,000		£85,000
	Net present value					

The firm is assuming a discount rate of 10% and so the discount factors to use are:

Year 1	0.909
Year 2	0.826
Year 3	0.751
Year 4	0.683
Year 5	0.621

#### Part 4 - Which system is best?

Write a report for the firm to use giving recommendations/information as follows:

- Which system they should use on the basis of each investment appraisal method
- Which system would be best overall taking into account the results from all three methods
- Non-financial issues they should be aware of when choosing their system
- The possible limitations of investment appraisal

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