

# IB Business Management – Finance and Accounts

## 3.8: Investment Appraisal: Exam Practice Question



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### 3.8 INVESTMENT APPRAISAL: EXAM PRACTICE QUESTION

Read the case study below and answer the questions that follow.

#### INVESTING TO STAY COMPETITIVE



Rapid Print Plc. is a large printing firm offering a range of services to industry, such as printed catalogues, leaflets and brochures. It operates in a very competitive market as it is relatively easy for new firms to join using the latest computer software 'page making' packages.

In an effort to maintain market share, the directors of Rapid Print Plc. are considering several new investment projects. The two most promising schemes are:

**Project Y:** A newly designed highly automated printing press with fast changeover facilities and full colour ability. Direct internet links with customers would allow for rapid input of new material to be printed. Two highly trained operatives will be required and this would mean six redundancies from existing staff.

**Project Z:** A semi-automated machine with a more limited range of facilities but with proven reliability. Existing staff could operate this machine but there would be three redundancies. It is very noisy and local residents may complain.

The finance director was asked to undertake an investment appraisal of these two machines. She gathered the following data. Each additional unit produced would be sold for an average of \$1.25, but there would be additional variable costs of \$0.50 per unit. In addition, the annual operational cost of the two machines is expected to be \$1 million for Y and \$0.5 million for Z. The introduction of either machine would involve considerable disruption to existing production. Staff would have to be selected and trained for project Y and the trade union is very worried about potential job cuts. The residual value of Y is expected to be \$1 million and of Z, \$0.5 million.

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	Project Y	Project Z
<b>Purchase price (\$m)</b>	20	12
<b>Expected life expectancy</b>	5 years	4 years
<b>Forecast annual sales</b>	8	6

Source: [www.BusinessManagementIB.com](http://www.BusinessManagementIB.com)

### QUESTIONS: 36 MARKS, 65 MINUTES

1. Define the terms:
  - i. Residual value
  - ii. Expected life expectancy

**[4 marks]**
2. Explain how Rapid Print might have forecast future annual sales. 

**[6 marks]**
3. Calculate for each project:
  - i. The payback period
  - ii. The average annual rate of return (ARR)

**[8 marks]**
4. On the basis of your results and any other relevant factors, advise Asia Print on which investment project it should choose. 

**[7 marks]**