

FACTFILE: GCE PROFESSIONAL BUSINESS SERVICES

UNIT AS 3: FINANCIAL DECISION MAKING – INVESTMENT APPRAISAL



Learning Outcomes

Students should be able to:

- Demonstrate understanding of the following methods of investment appraisal for financial decision making:
 - Payback
 - Net Present Value (NPV)
- conduct an investment appraisal in a given business context;
- evaluate the outcomes of an investment appraisal and make recommendations for investment decision making;
- evaluate the methods of investment appraisal a professional business services firm can use with a client when advising on financial decision making.



Investment Appraisal

Investment appraisal is an analysis of alternative investment projects using standard investment appraisal techniques in order to determine the investment most likely to meet organisational objectives.

Reasons for Investment Appraisal in context of financial decision making:

- Enables consultant to provide a detailed analysis of options to managers and help them make decisions on capital investment projects;
- Enables projects to be evaluated by a consultant with a view to highlighting strengths and weaknesses of it to the management team;
- Enables management team and the business consultant to compare competing projects
- Management decisions are based on financial criteria;
- Use of discounting technique usually results in an optimal decision being taken and implemented.



Methods of investment appraisal for decision making:

Payback Method:

Estimates the time it takes for an investment to repay the initial outlay.

Decision Rule: invest in that project which has the shortest payback period.

Net Present Value:

The determination of the overall net cash position of a project, taking into consideration all project cash flows and the application of a discount factor on an annual basis in order to get a value called the Net Present Value.

Decision Rule: invest in that project which gives the highest positive net present value.

Evaluation of Payback method of Investment Appraisal:

Advantages:

- Easy to understand;
- Simple to use;
- Good for screening projects;
- Indicates how long money is at risk;
- Useful in a volatile or fast changing market.

Disadvantages:

- Does not take into account any cash flow after the payback period;
- Overall profitability of the investment is not considered;
- Does not consider the current value of the cash.



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Evaluation of Discounting/Net Present Value method of Investment Appraisal:

Advantages:

- Adjusts for financial risk – considers the time value of money;
- More robust method compared to Payback.

Disadvantages:

- Difficult to calculate, sometimes results easily misinterpreted;
- Difficult to estimate the discount rate accurately;
- Difficult to estimate annual cash flows.



Summary

Investment appraisal is a detailed analysis of proposed investment projects. Various methods of analysis include Payback method and Discounting (NPV).



Revision Questions

1. Explain what is meant by the term 'Investment Appraisal'.
2. Evaluate the extent to which each method stated above is useful to a business consultant advising a client for the purpose of decision making.



Sources for further study

www.bbc.co.uk/news/business

www.investni.com/news/index.html

www.tutor2u.net

Hall, D et al. (2010), Business Studies, 4th Ed., Pearson Longman, Harlow, UK.

Marcousi, I., et al., (2014), Business Studies for A Level, 3rd Ed., (pp. 420-431), Hodder Education, London, UK.

McAree, D., (2009), Top 5 Things To Do At A-Level Business Studies.

McAree, D., (2009), 3 Best Things To Do At A-Level Business Studies.

Mottershead, A, et al., (2015), Business for A Level, (pp. 218-225), Hodder Education, London, UK.

APPENDIX 1: CASE STUDIES

Example 1: Payback method

Jimmy Bond is an electrician, and is considering the purchase of a new welding machine for use in the business, which would enable him to provide a high quality service to his customers. There are two models that will suit his purpose. He has limited financial knowledge, so has asked you, as his business consultant, to advise which machine to purchase.

- Machine WELD100
- Cost £4,500

Estimated net cash flows

	£
Year 1	1,900
Year 2	2,200
Year 3	2,400
Year 4	2,600

- Machine WELD200
- Cost £5,200

Estimated net cash flows

	£
Year 1	2,200
Year 2	2,400
Year 3	2,600
Year 4	2,800

Your initial workings undertaken on Jimmy's behalf reveal the following results:

Machine WELD100:
Payback = 2 years 2 months

Machine WELD200:
Payback = 2 years x 2.77 months.

Solution:

Recommendation: invest in WELD100 welding machine – appears to have shorter payback period of 2 years and 2 months.

Example 2: Net Present Value:

Eva Buns has sought your help in making an investment decision, in respect of the acquisition of a new apple pie machine for her bakery, costing £10,000. She estimates that the following cash flows will occur:

Year	Revenue receipts £	Operating payments £
1	4,000	1,400
2	5,000	3,200
3	6,000	3,500
4	7,000	3,800
5	7,500	4,000

You estimated that the discount factor is 10%. It is assumed that all costs are paid and revenues received on the last day of each year. The following is an extract from the present value tables of £ 1 at 10%:

Discount Factor	10%
Year 0	1.000
Year 1	0.909
Year 2	0.826
Year 3	0.751
Year 4	0.683
Year 5	0.621

Eva is undecided about investing in the new apple pie machine, since she does not understand the concept of discounting.

You have undertaken a series of initial workings to support your investigation of this project and they reveal the following present values and overall net present value (Point to note*: calculations are not done separately for the receipts and payments cash flows - they are netted off since the discount factor applies to the net figure):

Year	Cashflow* £	Discount Factor 10%	Present Value £
0	-10000	1.000	-10000.00
1	2600	0.909	2363.40
2	1800	0.826	1486.80
3	2500	0.751	1877.50
4	3200	0.683	2185.60
5	3500	0.621	<u>2173.50</u>
		NPV	<u>86.80</u>

Solution:

Recommendation: Eva should invest in the new apple pie machine for her bakery business. It would yield a POSITIVE Net present value.