Methods of investment appraisal

- 3 main methods of investment appraisal:
    - payback period
    - average rate of return/ annual rate of return/ average annual rate of return (AAR)
    - net present value (NPV)
- Each method provides a numerical calculation of the financial benefits of an investment.
    - This result can be compared with the return required by the business and/or the results of alternative investment decisions

Payback

- Calculated by adding the annual returns from an investment until the cumulative total equals the initial cost of the investment.
- The exact time at which this occurs is the payback period
    - It is often measured in years, but for some investments, months or weeks may be more appropriate.
- Firms will hope for as short a payback period as possible.

Average rate of return

- Firms want to achieve as high a percentage return as possible.
    - If the % return exceeds the interest rate that the business is paying, the project is financially worthwhile.

ARR % = total net return or surplus from a project or number of years/initial cost x 100.

Net present value

- Any receipts (or payments) in the future are considered to be worth less than the equivalent sum received (or paid) today.
- In effect, future sums are discounted by a certain % to reflect their lower value.
    - A commonly used discount rate is the current rate of interest, as this is the opportunity cost of using money for a particular investment.
    - The opportunity cost is assumed to be the rate of return that the firm could have made just by saving the money involved.

Discounted cash flow

- Payback and average rate of return methods assume that the exact timing of the payments and receipts is not important. They ignore the time value of money.
    - The net present value method of investment appraisal includes this factor in its calculations.
- There is no single agreed percentage by which future values should be discounted, as companies face different circumstances.
- Whatever the financial situation of a firm, the current market interest rate can be earned if money is received immediately.
    - This acts as a guide to the loss or discount that should be applied to money in the future.
- The process of reducing the value of future sums is known as discounted cash flow.
    - As time progresses, the 'present' value of a given future sum declines.
    - The higher the discount rate, the lower the value. Exact values can be determined from a 'present value' table.

Strengths and weaknesses of investment appraisal methods

Payback

Advantages

- Payback period is easy to calculate, If many projects are being considered, this may save valuable