**Making Investment Decisions A2 Business Studies Unit 3**

**Net Present Value**

*As managers of Walkers Crisps, you have now calculated both the Payback method and the Average rate of return in an attempt to judge whether to invest in Machine A or Machine B. You must now calculate the Net Present Value for both Machine A and Machine B.*

*Below, your secretary has provided you with the following table, showing:*

* *Net cash flow of machine A*
* *10% Discount factor*

*You are to calculate the NPV for both machine A and machine B.*

**Machine A**

|  |  |  |  |
| --- | --- | --- | --- |
| **Year** | **Net Cash Flow** | **10% Discount Factor** | **NPV** |
| 0 | (£750,000) | 1 |  |
| 1 | £142,500 | 0.91 |  |
| 2 | £192,500 | 0.83 |  |
| 3 | £252,500 | 0.75 |  |
| 4 | £252,500 | 0.68 |  |
| 5 | £292,500 | 0.62 |  |
| ***Net Present Value*** | | |  |

**Step 1:**   
Multiply each year’s net cash inflow by the relevant discount factor, to calculate the NPV.

**Step 2:**  
Add up all the NPVs to calculate the net cash gain from the project expressed in today’s terms.

**Task:** Now calculate the NPV for Machine B. Use your Net Cash Flow figures from your other sheet to help you fill it in.

|  |  |  |  |
| --- | --- | --- | --- |
| **Year** | **Net Cash Flow** | **10% Discount Factor** | **NPV** |
| 0 |  | 1 |  |
| 1 |  | 0.91 |  |
| 2 |  | 0.83 |  |
| 3 |  | 0.75 |  |
| 4 |  | 0.68 |  |
| 5 |  | 0.62 |  |
| ***Net Present Value*** | | |  |

**Analysis:**

* If project is predicted to produce a positive NPV then it should be accepted.
* If choosing between two investments, the highest NPV should be selected.
* If the NPV is negative then the project should be rejected.
* Positive NPV = Accept
* Negative NPV = Reject

**Evaluation:**

***Advantages:*** Takes account of the fact that £1 today is worth less than £1 in the future; due to purchasing power falling and inflation changing.

***Disadvantages:*** Doesn’t take into account the speed of repayment, and it can be difficult to choose the correct discount factor, which non-financial managers can find hard to understand.