

Exercise questions:

1. The management of Fine Electronics Company is considering to purchase an IT equipment to be attached with the main manufacturing machine. The equipment will cost RM6,000 and will increase annual cashflow by RM2,200. The useful life of the equipment is 6 years. After 6 years, it will have no salvage value. The management decides on a 20% discount rate for the investments.

Calculate the net present value (NPV) of this investment project.

2. An initial investment of RM8,320 on IT devices is expected to generate cash inflows of RM3,411, RM4,070, RM5,824 and RM2,065 at the end of first, second, third and fourth year respectively. At the end of the fourth year, the IT devices will be sold for RM900. Calculate the net present value of the investment if the discount rate is 18%.
3. Assume Newco is deciding between two machines (Machine A and Machine B) in order to add capacity to its existing plant. The company estimates the cash flows* for each machine to be as follows:

Figure 11.2: Expected after-tax cash flows for the new machines

Year	Machine A	Machine B
0	-\$5,000	-\$2,000
1	500	500
2	1,000	1,500
3	1,000	1,500
4	1,500	1,500
5	2,500	1,500

Calculate the payback period of the two machines using the above cash flows and decide which new machine Newco should accept. Assume the maximum payback period the company establishes is five years.

4. Using our last example above, determine the discounted payback period for Machine A and Machine B, and determine which project Newco should accept. As calculated previously, Newco's discount rate is 8.4%.

Figure 11.4: Discounted cash flows for Machine A and Machine B

Year	0	1	2	3	4	5	6
Cash Flow - Machine A	-5,000	500	1,000	1,000	1,500	2,500	1,000
Discounted Cash Flow	-5,000	461	851	785	1,086	1,670	616
Cumulative Cash Flow	-5,000	-4,539	-3,688	-2,903	-1,817	-147	469
Cash Flow - Machine B	-2,000	500	1,500	1,500	1,500	1,500	1,500
Discounted Cash Flow	-2,000	461	1,277	1,178	1,086	1,002	925
Cumulative Cash Flow	-2,000	-1,539	-262	915	2,002	3,004	3,928

5. Cyber Heights management company has put initial investment cost amounting RM100,000 for its project to set up a new Financial Management Information System. The new project will be a 5 year contract, with expected inflow of RM40,000 and spending of RM5,000 per year. The discount rate is 10%.

Calculate the Net Present Value, Payback Period, Return on Investment of the project.