

E10-2 Herky Foods is considering acquisition of a new wrapping machine. The initial investment is estimated at \$1.25 million, and the machine will have a 5-year life with no salvage value. Using a 6% discount rate, determine the *net present value (NPV)* of the machine given its expected operating cash inflows shown in the following table. Based on the project's NPV, should Herky make this investment?

Year	Cash inflow
1	\$400,000
2	375,000
3	300,000
4	350,000
5	200,000

E10-3 Axis Corp. is considering investment in the best of two mutually exclusive projects. Project Kelvin involves an overhaul of the existing system; it will cost \$45,000 and generate cash inflows of \$20,000 per year for the next 3 years. Project Thompson involves replacement of the existing system; it will cost \$275,000 and generate cash inflows of \$60,000 per year for 6 years. Using an 8% cost of capital, calculate each project's NPV, and make a recommendation based on your findings.

E10-4 Billabong Tech uses the *internal rate of return (IRR)* to select projects. Calculate the IRR for each of the following projects and recommend the best project based on this measure. Project T-Shirt requires an initial investment of \$15,000 and generates cash inflows of \$8,000 per year for 4 years. Project Board Shorts requires an initial investment of \$25,000 and produces cash inflows of \$12,000 per year for 5 years.

E10-5 Cooper Electronics uses *NPV profiles* to visually evaluate competing projects. Key data for the two projects under consideration are given in the following table. Using these data, graph, on the same set of axes, the NPV profiles for each project using discount rates of 0%, 8%, and the IRR.

Year	Operating cash inflows	
	Terra	Firma
1	\$ 7,000	\$6,000
2	10,000	9,000
3	12,000	9,000
4	10,000	8,000
Initial investment		\$25,000
		\$30,000

P10-1 Payback period Jordan Enterprises is considering a capital expenditure that requires an initial investment of \$42,000 and returns after-tax cash inflows of \$7,000 per year for 10 years. The firm has a maximum acceptable payback period of 8 years.

- Determine the *payback period* for this project.
- Should the company accept the project? Why or why not?

Problems

All problems are available in MyFinancelab.