

## Payback Practice

1. Payback Period – Given the cash flows of the four projects, A, B, C, and D, and using the Payback Period decision model, which projects do you accept and which projects do you reject with a three year cut-off period for recapturing the initial cash outflow? Assume that the cash flows are equally distributed over the year for Payback Period calculations.

<b>Projects</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
<b>Cost</b>	\$10,000	\$25,000	\$45,000	\$100,000
<b>Cash Flow Year One</b>	\$4,000	\$2,000	\$10,000	\$40,000
<b>Cash Flow Year Two</b>	\$4,000	\$8,000	\$15,000	\$30,000
<b>Cash Flow Year Three</b>	\$4,000	\$14,000	\$20,000	\$20,000
<b>Cash Flow Year Four</b>	\$4,000	\$20,000	\$20,000	\$10,000
<b>Cash Flow year Five</b>	\$4,000	\$26,000	\$15,000	\$0
<b>Cash Flow Year Six</b>	\$4,000	\$32,000	\$10,000	\$0

2. Payback Period – What are the Payback Periods of Projects E, F, G and H? Assume all cash flows are evenly spread throughout the year. If the cut-off period is three years, which projects do you accept?

<b>Projects</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>
<b>Cost</b>	\$40,000	\$250,000	\$75,000	\$100,000
<b>Cash Flow Year One</b>	\$10,000	\$40,000	\$20,000	\$30,000
<b>Cash Flow Year Two</b>	\$10,000	\$120,000	\$35,000	\$30,000
<b>Cash Flow Year Three</b>	\$10,000	\$200,000	\$40,000	\$30,000
<b>Cash Flow Year Four</b>	\$10,000	\$200,000	\$40,000	\$20,000
<b>Cash Flow year Five</b>	\$10,000	\$200,000	\$35,000	\$10,000
<b>Cash Flow Year Six</b>	\$10,000	\$200,000	\$20,000	\$0

Q-3

Discounted Payback Period – Given the following four projects and their cash flows, calculate the discounted payback period with a 5% discount rate, 10% discount rate, and 20% discount rate. What do you notice about the payback period as the discount rate rises? Explain this relationship.

<b>Projects</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
<i>Cost</i>	\$10,000	\$25,000	\$45,000	\$100,000
<i>Cash Flow Year One</i>	\$4,000	\$2,000	\$10,000	\$40,000
<i>Cash Flow Year Two</i>	\$4,000	\$8,000	\$15,000	\$30,000
<i>Cash Flow Year Three</i>	\$4,000	\$14,000	\$20,000	\$20,000
<i>Cash Flow Year Four</i>	\$4,000	\$20,000	\$20,000	\$10,000
<i>Cash Flow year Five</i>	\$4,000	\$26,000	\$15,000	\$10,000
<i>Cash Flow Year Six</i>	\$4,000	\$32,000	\$10,000	\$0

Q # 4

Discounted Payback Period – Graham Incorporated uses discounted payback period for projects under \$25,000 and has a cut off period of 4 years for these small value projects. Two projects, R and S are under consideration. The anticipated cash flows for these two projects are listed below. If Graham Incorporated uses an 8% discount rate on these projects are they accepted or rejected? If they use 12% discount rate? If they use a 16% discount rate? Why is it necessary to only look at the first four years of the projects' cash flows?

<b>Cash Flows</b>	<b>Project R</b>	<b>Project S</b>
<i>Initial Cost</i>	\$24,000	\$18,000
<i>Cash flow year one</i>	\$6,000	\$9,000
<i>Cash flow year two</i>	\$8,000	\$6,000
<i>Cash flow year three</i>	\$10,000	\$6,000
<i>Cash flow year four</i>	\$12,000	\$3,000