



Capital Investment Model with Monte Carlo Simulation

Input Values

Input	Value
Initial Investment	(\$1,000,000)
Number of Periods (N)	4
Cash Flow (CF) in Periods 1 & 2	\$ 1,200,000
Cash Flow (CF) in Periods 3 & 4	\$ 1,000,000
Cost of Goods Sold (Common Size %)	35%
Fixed Cost	\$ 100,000
Tax Rate	30%
Required Rate of Return (I.e. Cost of Capital)	10%

Plough-Back Financial LLC

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Key Performance Indicators

NPV	\$ 313,070
Cost of Capital	10%
Internal Rate of Return (IRR)	14%
Payback Period (years)	1.3

	Year 0	Year 1	Year 2	Year 3	Year 4
Ln Item					
1 Sales Revenue		\$ 1,200,000	\$ 1,200,000	\$ 900,000	\$ 900,000
2 Cost of Goods Sold		420,000	420,000	315,000	315,000
4 Fixed Costs		<u>100,000</u>	<u>100,000</u>	<u>100,000</u>	<u>100,000</u>
5 Operating Income		\$ 680,000	\$ 680,000	\$ 485,000	\$ 485,000
6 Earnings Before Taxes		\$ 680,000	\$ 680,000	\$ 485,000	\$ 485,000
7 Taxes (30%)		<u>204,000</u>	<u>204,000</u>	<u>145,500</u>	<u>145,500</u>
8 After-Tax Earnings		\$ 476,000	\$ 476,000	\$ 339,500	\$ 339,500
9 Net Cash Flow		\$ 476,000	\$ 476,000	\$ 339,500	\$ 339,500
10 Present Value (PV) of Cash Flows (10% Cost of Capital)	\$ (1,000,000)	\$ 432,727	\$ 393,388	\$ 255,071	\$ 231,883
11 Initial Investment	\$ 1,000,000				
12 Cumulative Net Present Value (NPV)		<u>\$ (567,273)</u>	<u>\$ (173,884)</u>	<u>\$ 81,187</u>	<u>\$ 313,070</u>
Payback Period		FALSE	FALSE	1.3	3.4

Simulation Summary

Summary Information	
Workbook Name	Capital Budgeting Model.xls
Number of Simulations	3
Number of Iterations	100
Number of Inputs	3
Number of Outputs	2
Sampling Type	Monte Carlo
Simulation Start Time	5/17/2007 11:27
Simulation Stop Time	5/17/2007 11:27
Simulation Duration	00:00:01
Random Seed	1142254903

Output			Statistics						
Name	Cell	Sim	Minimum	Mean	Maximum	x1	p1	x2	p2
NPV - Base Case	C6	1	\$ 218,310	\$ 372,244	\$ 538,354	\$ 218,310	5%	\$ 538,354	95%
NPV - Best Case	C6	2	\$ 270,516	\$ 431,467	\$ 604,375	\$ 270,516	5%	\$ 604,375	95%
NPV - Worst Case	C6	3	\$ 169,595	\$ 316,999	\$ 476,753	\$ 169,595	5%	\$ 476,753	95%
Internal Rate of Return (IRR)	C8	1	9%	15%	22%	9%	5%	22%	95%
Internal Rate of Return (IRR)	C8	2	11%	18%	24%	11%	5%	24%	95%
Internal Rate of Return (IRR)	C8	3	7%	13%	20%	7%	5%	20%	95%

Input			Statistics						
Name	Cell	Sim	Minimum	Mean	Maximum	x1	p1	x2	p2
Cash Flow in Periods 1 & 2	Inputs!B10	1	\$ 1,080,000	\$ 1,183,200	\$ 1,320,000	\$ 1,080,000	5%	1320000	95%
Cash Flow in Periods 1 & 2	Inputs!B10	2	\$ 1,080,000	\$ 1,183,200	\$ 1,320,000	\$ 1,080,000	5%	1320000	95%
Cash Flow in Periods 1 & 2	Inputs!B10	3	\$ 1,080,000	\$ 1,183,200	\$ 1,320,000	\$ 1,080,000	5%	1320000	95%
Cash Flow in Periods 3 & 4	Inputs!B12	1	\$ 900,000	\$ 1,011,000	\$ 1,100,000	\$ 900,000	5%	1100000	95%
Cash Flow in Periods 3 & 4	Inputs!B12	2	\$ 900,000	\$ 1,011,000	\$ 1,100,000	\$ 900,000	5%	1100000	95%
Cash Flow in Periods 3 & 4	Inputs!B12	3	\$ 900,000	\$ 1,011,000	\$ 1,100,000	\$ 900,000	5%	1100000	95%
Cost of Capital	Inputs!B20	1	10%	10%	10%	10%	5%	10%	95%
Cost of Capital	Inputs!B20	2	8%	8%	8%	8%	5%	8%	95%
Cost of Capital	Inputs!B20	3	12%	12%	12%	12%	5%	12%	95%