Cash Flow Analysis

Probabilistic Data: *(All Figures are in thousands)*

Assume Normal Distribution	Mean	Std Dev
R&D Cost (in year 0)	2,200.00	300.00
Year 1 Production Cost	7.20	0.25
Year 1 Demand	100	10
Annual Inflation Rate	5%	2%

Economic Data: (in thousands)

Year 1 Price	$ 11.00
Year-end Discount	30%
Discount Rate	10%
Planning Horizon	10
Service Level	85%

Year	0	1	2	3	4	5	6	7	8	9	10
R&D Cost	$2,328.00										
Price		$11.00	$11.84	$12.66	$13.31	$13.57	$14.45	$15.42	$16.25	$17.56	$18.44
Production Cost		$7.07	$7.61	$8.14	$8.56	$8.72	$9.29	$9.91	$10.45	$11.29	$11.85
Forecast		100	111	111	106	115	119	137	135	128	142
Production		110	122	122	117	125	129	147	146	139	152
Actual Demand		111	111	106	115	119	137	135	128	142	135
Profit		$433.60	$477.08	$491.90	$546.72	$581.37	$667.44	$755.08	$760.03	$868.81	$905.13
Inflation Rate		7.60%	7.01%	5.10%	1.93%	6.47%	6.73%	5.40%	8.05%	5.00%	0.62%

NPV $1,400.65

Average	$673.28
Stdev	$651.90

Cumulative Probabilites Distribution	NPV Values
25%	$199.57
50%	$679.77
75%	$1,138.93

USING VLOOKUP TO FIND NPV VALUES OF CORRESPONDING CUMULATIVE PROBABILITIES

CUMULATIVE DISTRIBUTION OF NPV

Monte Carlo Simulation

Cumulative Probabilities	NPV Values
0	-$1,310.79
0.001	-$1,117.22
0.002	-$1,047.24
0.003	-$1,044.08
0.004	-$925.72
0.005	-$910.99
0.006	-$904.42
0.007	-$892.80
0.008	-$886.32
0.009	-$844.13
0.01	-$788.00
0.011	-$765.18
0.012	-$748.39
0.013	-$732.08
0.014	-$728.24
0.015	-$700.93
0.016	-$698.91
0.017	-$694.74
0.018	-$685.78
0.019	-$671.33
0.02	-$664.08
0.021	-$653.48
0.022	-$642.76
0.023	-$630.55