

Table 1. Descriptive Statistics for Simulated Values of NPV in INR¹

Base NPV	4,091.9
Simulation Statistic	Value
Mean	3,889.60
Median	3,820.83
St. Dev	632.55
Variance	400,122.15
Skewness	0.56
Kurtosis	-0.06
1st Q	3,403.37
3rd Q	4,284.53
Min	2,530.44
Max	6,147.01
number of simulations	3,000.00

Sensitivity Analysis is performed for each of the Input Variables. The method of performing the sensitivity analysis is to obtain the NPV at the minimum as well as maximum values of that variable, when other input variables are at the Base Value selected (*ceteris paribus*).

Parameter Name	Base Case	Type	Min.	Max	Mode	St Dev	Mean.	Graph
Sales Growth %	20%	T	5%	20%	10%			X
COGS to Sales %	22%	T	15%	25%	20%			X
SGA to Sales %	15%	N				2%	15%	X
Depr to Sales %	10%	U	5%	13%				X
Capex to Sales %	20%	U	18%	22%				X
Terminal Yr growth rate	4%	U	3%	5%				X
WACC %	12%	U	10%	13%				X
(CA - CL) to Sales %	10%	U	10%	13%				X
Tax %	30%							
number of years	3	<i>(between 3 and five, whole numbers)</i>						
number of simulations	3,000	<i>(between 1000 and 5000)</i>						
base year sales	500.00							



Figure 1. Entry of Parameters by the User²

5.2. Graphical Results

Graphs are generated for Input Variable Simulations. For Sales Growth % and COGS/Sales % the selection has been T for Triangular and a simple visual inspection of Figure 2 and Figure 3 show that the Triangular distribution does seem to hold, for the selection of Mode = 10% for Sales Growth % and Mode = 20% for COGS/Sales %. Figure 4 shows the Normal Distribution of the SGA/Sales % Input Variable Figure 5 shows the Uniform Distribution for the Input Variables Depreciation to Sales %. Further, the impact of each input Variable is plotted on the Sensitivity Analysis Graph. Figure 6 shows the NPV fluctuations and it is observable that the NPV values follow a stationary process. Figure 7 shows an approximately normal distribution of the NPV and Figure 8 shows the S-shaped curve for cumulative frequency of the NPV.

5.3 Proposed Improvements

¹ The currency chosen for this paper is Indian Rupee or INR. However, the currency can be modified in the software as required by the user and is fully configurable in MS Excel 2019

² For base year sales, currency chosen is Indian Rupee or INR

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