

REPORT - Nuclear Attack Scenario

**Crystal Ball Report - Custom**

Simulation started on 12/5/2005 at 19:01:16

Simulation stopped on 12/5/2005 at 19:01:18

Run preferences:

Number of trials run	10,000
Extreme speed	
Monte Carlo	
Random seed	
Precision control on	
Confidence level	95.00%

Run statistics:

Total running time (sec)	25.33
Trials/second (average)	395
Random numbers per sec	1,974

Crystal Ball data:

Assumptions	5
Correlations	0
Correlated groups	0
Decision variables	0
Forecasts	4

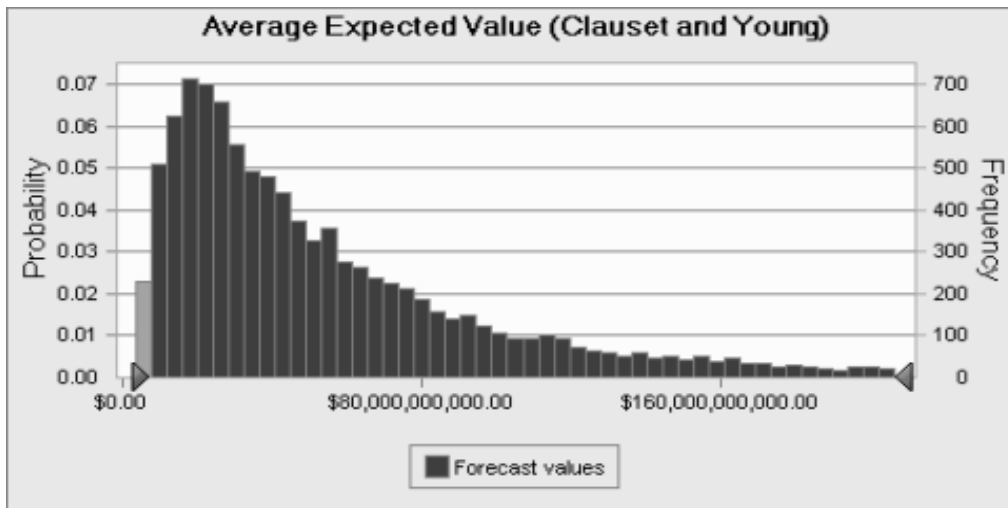
**Forecasts**

**Expected Value Formulas - Nuclear Attack Scenarios**

**Forecast: Average Expected Value (Clauset and Young)**

Summary:

Certainty level is 95.00%  
 Certainty range is from \$7,353,247,426.21 to \$207,819,312,669.49  
 Entire range is from \$3,435,172,988.84 to \$535,234,452,920.52  
 Base case is \$42,702,041,263.01  
 After 10,000 trials, the std. error of the mean is \$529,552,341.26



Statistics:	Forecast values
Trials	10,000
Mean	\$57,961,866,440.61
Median	\$41,104,420,500.21
Mode	---
Standard Deviation	\$52,955,234,126.14
Skewness	2.22
Kurtosis	10.04
Coeff. of Variability	0.91
Minimum	\$3,435,172,988.84
Maximum	\$535,234,452,920.52
Range Width	\$531,799,279,931.68
Mean Std. Error	\$529,552,341.26

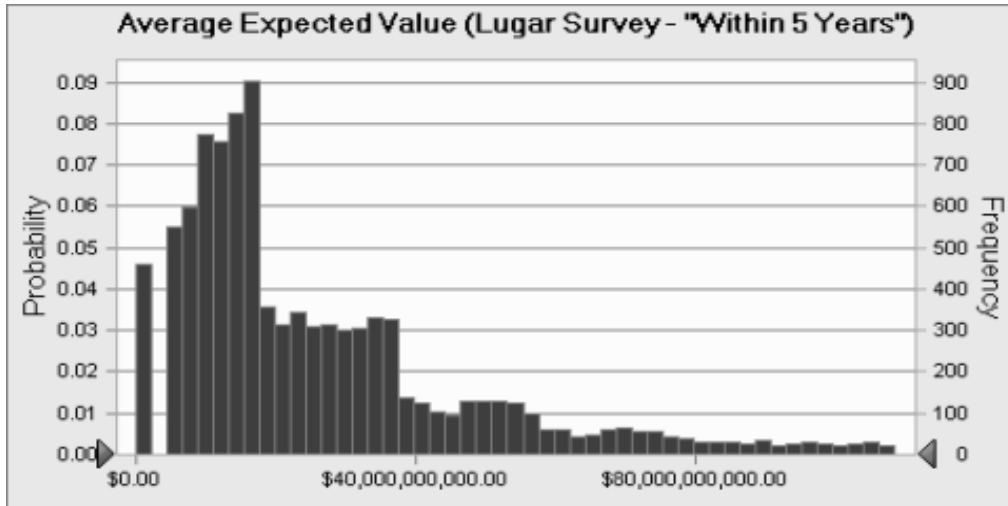
**Forecast: Average Expected Value (Clauset and Young) (cont'd)**

Percentiles:	Forecast values
0%	\$3,435,172,988.84
10%	\$13,455,508,247.28
20%	\$19,501,864,780.77
30%	\$25,444,085,078.39
40%	\$32,499,456,653.92
50%	\$41,104,420,500.21
60%	\$51,910,328,549.17
70%	\$65,611,880,932.54
80%	\$86,048,395,035.30
90%	\$125,006,255,142.74
100%	\$535,234,452,920.52

**Forecast: Average Expected Value (Lugar Survey - "Within 5 Years")**

Summary:

Entire range is from \$0.00 to \$199,649,945,529.95  
 Base case is \$29,161,585,365.85  
 After 10,000 trials, the std. error of the mean is \$284,428,486.76



Statistics:	Forecast values
Trials	10,000
Mean	\$28,985,280,212.30
Median	\$18,225,076,811.96
Mode	\$0.00
Standard Deviation	\$28,442,848,675.93
Skewness	2.30
Kurtosis	9.69
Coeff. of Variability	0.98
Minimum	\$0.00
Maximum	\$199,649,945,529.95
Range Width	\$199,649,945,529.95
Mean Std. Error	\$284,428,486.76

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**Forecast: Average Expected Value (Lugar Survey - "Within 5 Years") (cont'd)**

Percentiles:	Forecast values
0%	\$0.00
10%	\$6,614,711,404.60
20%	\$10,089,112,861.12
30%	\$12,879,212,645.29
40%	\$15,589,959,799.59
50%	\$18,225,076,811.96
60%	\$25,282,582,448.69
70%	\$32,393,965,863.34
80%	\$41,552,331,995.48
90%	\$63,762,302,331.98
100%	\$199,649,945,529.95

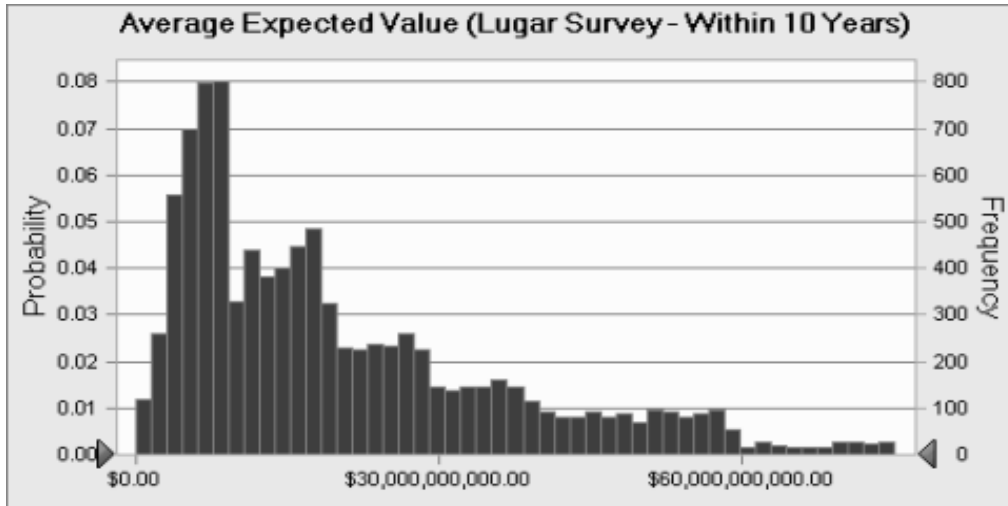
**Forecast: Average Expected Value (Lugar Survey - Within 10 Years)**

Summary:

Entire range is from \$0.00 to \$99,990,676,075.68

Base case is \$22,041,139,240.51

After 10,000 trials, the std. error of the mean is \$190,318,668.26



Statistics:	Forecast values
Trials	10,000
Mean	\$21,926,991,202.85
Median	\$16,114,087,473.07
Mode	\$0.00
Standard Deviation	\$19,031,866,825.78
Skewness	1.54
Kurtosis	5.31
Coeff. of Variability	0.87
Minimum	\$0.00
Maximum	\$99,990,676,075.68
Range Width	\$99,990,676,075.68
Mean Std. Error	\$190,318,668.26

REPORT - Nuclear Attack Scenario

**Forecast: Average Expected Value (Lugar Survey - Within 10 Years) (cont'd)**

Percentiles:	Forecast values
0%	\$0.00
10%	\$4,799,912,061.80
20%	\$6,865,887,372.92
30%	\$8,659,842,228.47
40%	\$12,244,932,878.76
50%	\$16,114,087,473.07
60%	\$19,715,504,064.91
70%	\$26,257,883,277.03
80%	\$34,938,948,078.75
90%	\$49,938,234,689.03
100%	\$99,990,676,075.68

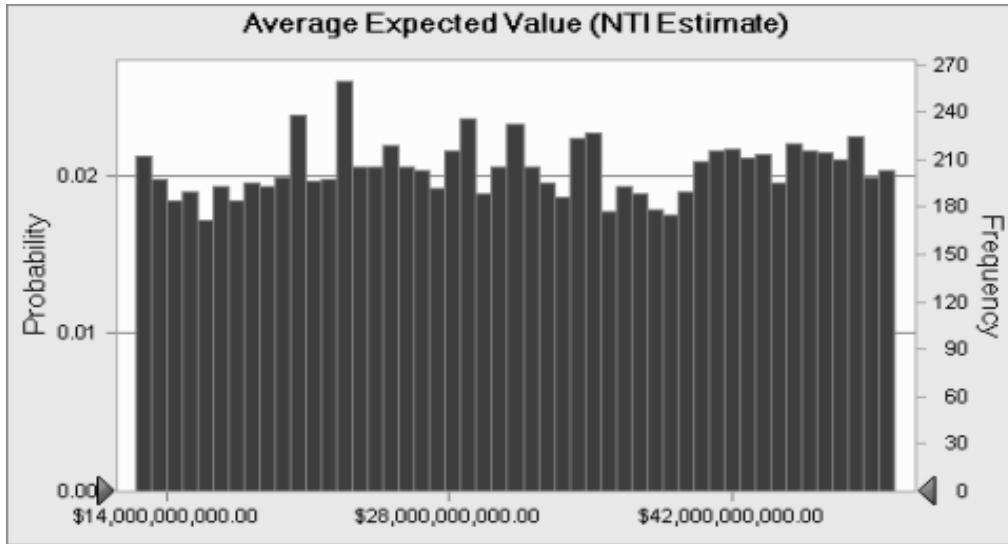
**Forecast: Average Expected Value (NTI Estimate)**

Summary:

Entire range is from \$12,503,868,370.55 to \$49,999,755,562.75

Base case is \$31,250,000,000.00

After 10,000 trials, the std. error of the mean is \$107,863,793.40



Statistics:	Forecast values
Trials	10,000
Mean	\$31,398,635,968.63
Median	\$31,256,608,091.65
Mode	---
Standard Deviation	\$10,786,379,339.84
Skewness	0.00
Kurtosis	1.81
Coeff. of Variability	0.34
Minimum	\$12,503,868,370.55
Maximum	\$49,999,755,562.75
Range Width	\$37,495,887,192.20
Mean Std. Error	\$107,863,793.40



**Forecast: Average Expected Value (NTI Estimate) (cont'd)**

Percentiles:	Forecast values
0%	\$12,503,868,370.55
10%	\$16,511,100,881.74
20%	\$20,406,779,202.36
30%	\$23,913,167,102.22
40%	\$27,672,161,605.52
50%	\$31,256,608,091.65
60%	\$34,944,545,447.33
70%	\$38,927,328,313.67
80%	\$42,704,997,225.76
90%	\$46,346,709,188.70
100%	\$49,999,755,562.75

End of Forecasts

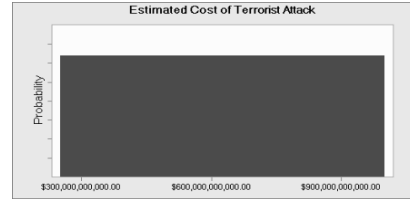
**Assumptions**

**Expected Value Formulas - Nuclear Attack Scenarios**

**Assumption: Estimated Cost of Terrorist Attack**

Uniform distribution with parameters:

Minimum \$250,000,000,000.00  
 Maximum \$1,000,000,000,000.00

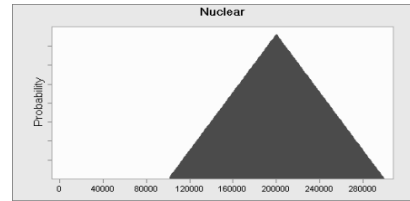


**Assumption: Nuclear Casualties**

Triangular distribution with parameters:

Minimum 100000  
 Likeliest 200000  
 Maximum 300000

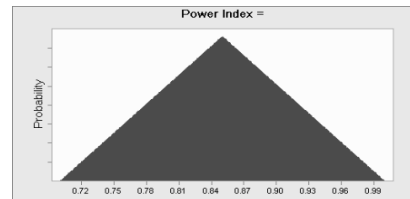
Selected range is from 1 to 300000



**Assumption: Power Index**

Triangular distribution with parameters:

Minimum 0.70  
 Likeliest 0.85  
 Maximum 1.00

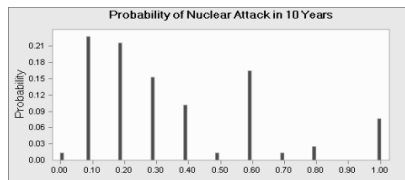


**Assumption: Probability of Nuclear Attack in 10 Years**

Custom distribution with parameters:

**Assumption: Probability of Nuclear Attack in 10 Years (cont'd)**

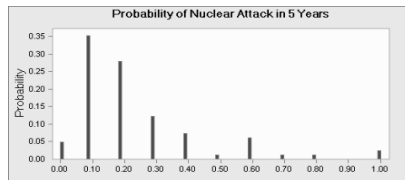
Value	Probability
0.00	1.00
0.09	18.00
0.19	17.00
0.29	12.00
0.39	8.00
0.49	1.00
0.59	13.00
0.69	1.00
0.79	2.00
0.99	2.00
1.00	4.00



**Assumption: Probability of Nuclear Attack in 5 Years**

Custom distribution with parameters:

Value	Probability
0.00	4.00
0.09	29.00
0.19	23.00
0.29	10.00
0.39	6.00
0.49	1.00
0.59	5.00
0.69	1.00
0.79	1.00
0.99	1.00
1.00	1.00



End of Assumptions