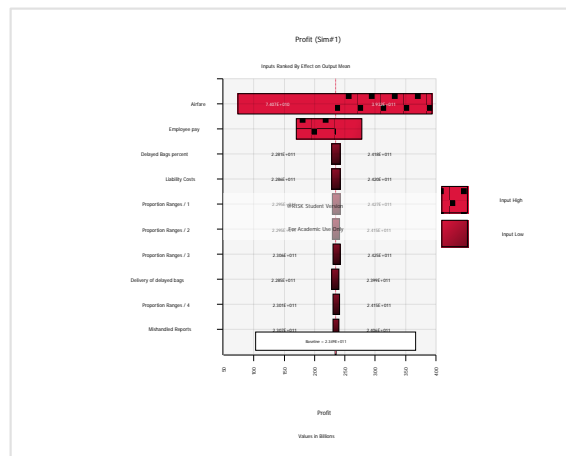
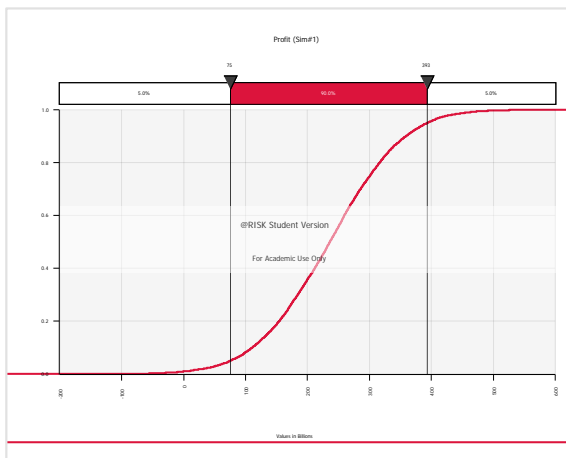
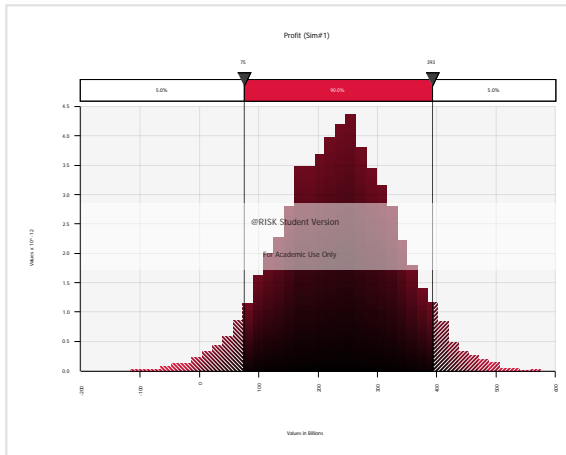


# @RISK Output Report for Profit B16 (Sim#1)

Performed By: Rushabh Barbhaya

Date: Friday, May 17, 2019 8:59:19 PM



## Simulation Summary Information

Workbook Name	Finals_v_5.xlsx
Number of Simulations	5
Number of Iterations	10000
Number of Inputs	90
Number of Outputs	4
Sampling Type	Latin Hypercube
Simulation Start Time	5/17/2019 20:50
Simulation Stop Time	5/17/2019 20:52
Simulation Duration	00:02:24
Random # Generator	Mersenne Twister
Random Seed	2036656490
Total Errors	0
Collect Distribution Samples	All
Convergence Testing	Disabled
Smart Sensitivity Analysis	Enabled

## Summary Statistics for Profit

Statistics		Percentile	
Minimum	- 116,510,040,348.52	1.0%	3,861,355,792.47
Maximum	574,773,833,173.74	2.5%	44,512,621,683.26
Mean	234,896,029,153.05	5.0%	75,379,233,125.65
Std Dev	96,573,486,258.69	10.0%	110,835,654,422.65
Variance	9.32644E+21	20.0%	154,303,872,927.21
Skewness	-0.047313813	25.0%	169,906,335,540.57
Kurtosis	3.005310095	50.0%	236,078,949,313.02
Median	236,078,949,313.02	75.0%	300,637,924,098.49
Mode	232,448,420,946.52	80.0%	316,783,478,225.44
Left X	75,379,233,125.65	90.0%	358,814,903,387.98
Left P	5%	95.0%	392,991,667,523.43
Right X	392,991,667,523.43	97.5%	420,270,121,631.92
Right P	95%	99.0%	459,508,712,510.28
#Errors	0		

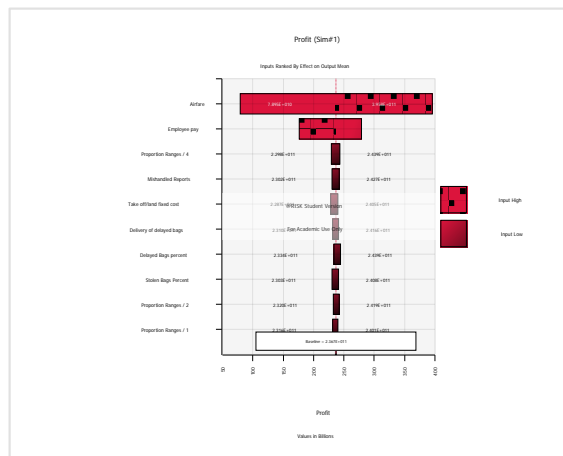
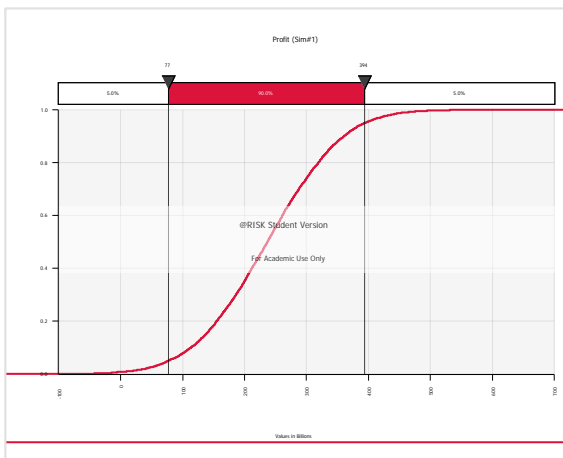
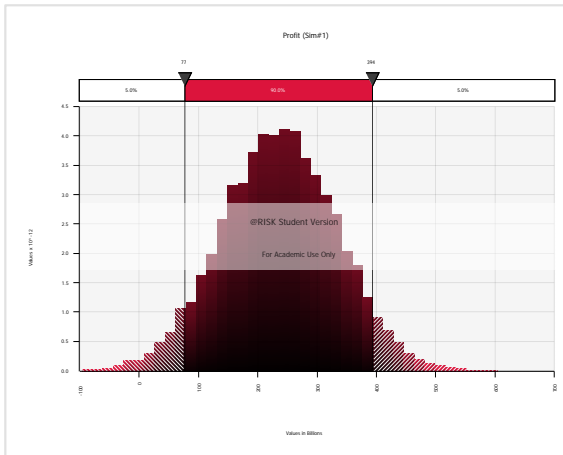
## Change in Output Statistic for Profit

Rank	Name	Lower	Upper
1	Airfare	74,071,753,010.48	393,234,472,907.66
2	Employee pay	170,071,681,492.57	277,840,067,854.10
3	Delayed Bags percent	228,107,792,680.48	241,805,507,298.18
4	Liability Costs	228,560,616,106.84	242,034,601,067.27
5	Proportion Ranges / 1	229,497,977,680.10	242,651,526,071.54
6	Proportion Ranges / 2	229,468,107,987.24	241,486,738,838.77
7	Proportion Ranges / 3	230,634,200,512.60	242,548,054,852.86
8	Delivery of delayed bags	228,483,469,369.95	239,938,294,201.85
9	Proportion Ranges / 4	230,068,259,642.50	241,519,963,352.76
10	Mishandled Reports	230,735,961,235.21	240,606,562,983.54

# @RISK Output Report for Profit B16 (Sim#1)

Performed By: Rushabh Barbhaya

Date: Friday, May 17, 2019 8:59:27 PM



## Simulation Summary Information

Workbook Name	Finals_v_5.xlsx
Number of Simulations	5
Number of Iterations	10000
Number of Inputs	90
Number of Outputs	4
Sampling Type	Latin Hypercube
Simulation Start Time	5/17/2019 20:50
Simulation Stop Time	5/17/2019 20:52
Simulation Duration	00:02:24
Random # Generator	Mersenne Twister
Random Seed	2036656490
Total Errors	0
Collect Distribution Samples	All
Convergence Testing	Disabled
Smart Sensitivity Analysis	Enabled

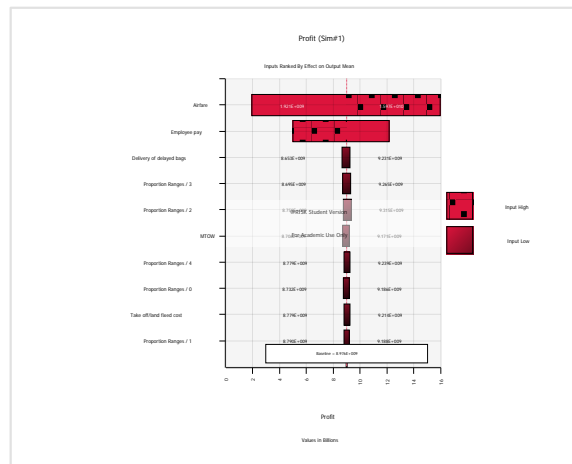
## Summary Statistics for Profit

Statistics		Percentile	
Minimum	- 96,114,190,291.43	1.0%	12,335,852,369.54
Maximum	603,833,831,789.21	2.5%	48,174,565,121.09
Mean	236,680,708,724.42	5.0%	77,093,802,306.77
Std Dev	96,204,200,202.35	10.0%	113,119,416,268.73
Variance	9.25525E+21	20.0%	155,087,123,088.59
Skewness	-0.005717663	25.0%	171,095,575,013.73
Kurtosis	2.947073366	50.0%	236,937,788,672.83
Median	236,937,788,672.83	75.0%	302,352,861,956.17
Mode	245,050,242,247.08	80.0%	318,965,391,014.69
Left X	77,093,802,306.77	90.0%	360,523,265,581.25
Left P	5%	95.0%	393,714,361,922.88
Right X	393,714,361,922.88	97.5%	423,770,703,655.32
Right P	95%	99.0%	457,893,276,710.53
#Errors	0		

## Change in Output Statistic for Profit

Rank	Name	Lower	Upper
1	Airfare	78,947,781,058.89	395,825,602,963.45
2	Employee pay	175,878,003,609.79	279,300,203,196.12
3	Proportion Ranges / 4	229,801,586,979.79	243,888,134,955.17
4	Mishandled Reports	230,216,437,181.31	242,672,042,526.33
5	Take off/land fixed cost	228,731,332,600.67	240,477,252,404.15
6	Delivery of delayed bags	231,012,563,769.66	241,583,262,343.60
7	Delayed Bags percent	233,433,540,359.58	243,945,284,337.33
8	Stolen Bags Percent	230,345,280,880.76	240,835,907,562.81
9	Proportion Ranges / 2	232,042,940,686.08	241,891,375,095.68
10	Proportion Ranges / 1	231,602,994,840.43	240,077,587,238.75

**Performed By:** Rushabh Barbhaya  
**Date:** Friday, May 17, 2019 8:59:35 PM



<b>Workbook Name</b>	Finals_v_5.xlsx
<b>Number of Simulations</b>	5
<b>Number of Iterations</b>	10000
<b>Number of Inputs</b>	90
<b>Number of Outputs</b>	4
<b>Sampling Type</b>	Latin Hypercube
<b>Simulation Start Time</b>	5/17/2019 20:50
<b>Simulation Stop Time</b>	5/17/2019 20:52
<b>Simulation Duration</b>	00:02:24
<b>Random # Generator</b>	Mersenne Twister
<b>Random Seed</b>	2036656490
<b>Total Errors</b>	0
<b>Collect Distribution Samples</b>	All
<b>Convergence Testing</b>	Disabled
<b>Smart Sensitivity Analysis</b>	Enabled

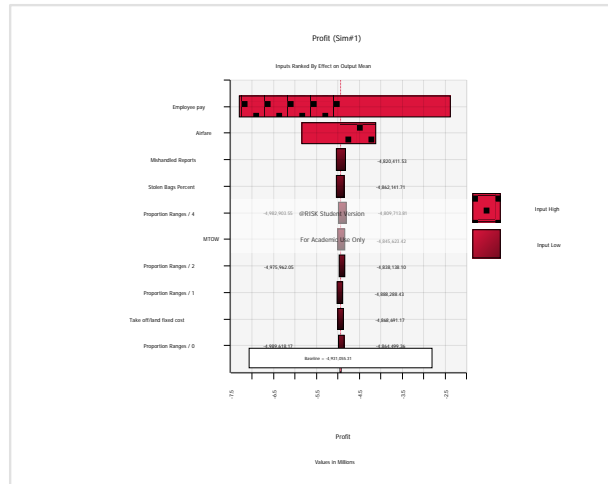
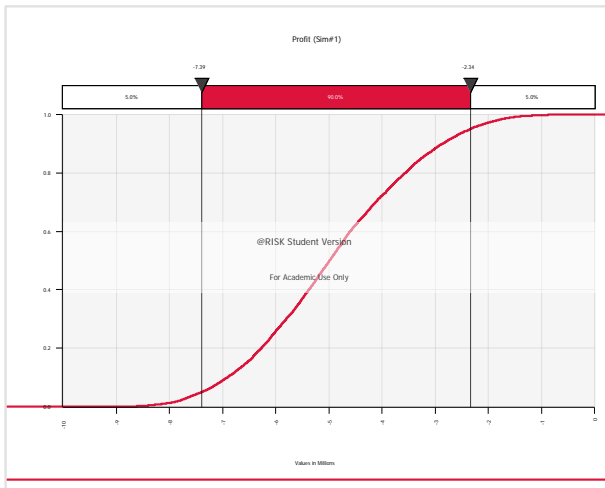
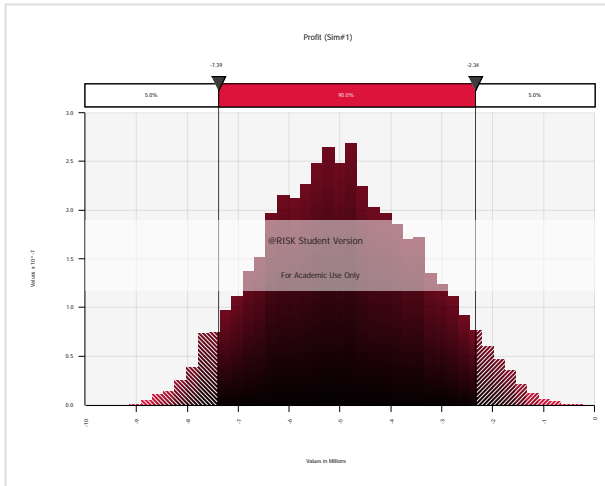
Statistics		Percentile
Minimum	- 10,127,845,551.05	1.0% - 1,576,719,664.85
Maximum	28,061,674,640.43	2.5% 23,464,929.49
Mean	8,976,074,446.60	5.0% 1,366,941,501.00
Std Dev	4,537,114,501.09	10.0% 3,065,627,667.01
Variance	2.05854E+19	20.0% 5,217,990,895.67
Skewness	-0.055569332	25.0% 5,961,455,336.93
Kurtosis	2.994764248	50.0% 9,035,412,226.44
Median	9,035,412,226.44	75.0% 12,101,482,850.08
Mode	9,756,371,874.99	80.0% 12,848,983,327.42
Left X	1,366,941,501.00	90.0% 14,738,078,473.45
Left P	5%	95.0% 16,389,098,296.65
Right X	16,389,098,296.65	97.5% 17,691,114,944.35
Right P	95%	99.0% 19,252,272,677.80
#Errors	0	

Rank	Name	Lower	Upper
1	Airfare	1,920,827,114.07	15,969,081,431.64
2	Employee pay	4,963,997,162.44	12,132,187,591.03
3	Delivery of delayed bags	8,652,971,214.54	9,230,644,861.56
4	Proportion Ranges / 3	8,694,571,466.10	9,265,327,021.57
5	Proportion Ranges / 2	8,758,882,340.86	9,314,794,212.86
6	MTOW	8,705,523,634.38	9,171,034,046.50
7	Proportion Ranges / 4	8,779,321,868.82	9,239,270,215.48
8	Proportion Ranges / 0	8,731,580,420.88	9,186,288,426.06
9	Take off/land fixed cost	8,778,939,668.59	9,213,852,199.00
10	Proportion Ranges / 1	8,789,830,644.51	9,187,620,758.63

# @RISK Output Report for Profit B16 (Sim#1)

Performed By: Rushabh Barbhaya

Date: Friday, May 17, 2019 8:59:44 PM



## Simulation Summary Information

Workbook Name	Finals_v_5.xlsx
Number of Simulations	5
Number of Iterations	10000
Number of Inputs	90
Number of Outputs	4
Sampling Type	Latin Hypercube
Simulation Start Time	5/17/2019 20:50
Simulation Stop Time	5/17/2019 20:52
Simulation Duration	00:02:24
Random # Generator	Mersenne Twister
Random Seed	2036656490
Total Errors	0
Collect Distribution Samples	All
Convergence Testing	Disabled
Smart Sensitivity Analysis	Enabled

## Summary Statistics for Profit

Statistics		Percentile	
Minimum	- 9,128,489.68	1.0%	- 8,105,858.79
Maximum	- 214,079.30	2.5%	- 7,739,479.65
Mean	- 4,931,055.31	5.0%	- 7,387,677.44
Std Dev	1,518,471.10	10.0%	- 6,901,117.74
Variance	2.30575E+12	20.0%	- 6,268,911.72
Skewness	0.108298968	25.0%	- 6,038,248.29
Kurtosis	2.516338996	50.0%	- 4,980,092.15
Median	- 4,980,092.15	75.0%	- 3,847,012.86
Mode	- 4,697,295.58	80.0%	- 3,563,708.04
Left X	- 7,387,677.44	90.0%	- 2,859,315.73
Left P	5%	95.0%	- 2,336,073.92
Right X	- 2,336,073.92	97.5%	- 1,947,808.52
Right P	95%	99.0%	- 1,585,806.83
#Errors	0		

## Change in Output Statistic for Profit

Rank	Name	Lower	Upper
1	Employee pay	- 7,300,963.34	- 2,369,444.19
2	Airfare	- 5,844,880.01	- 4,117,004.68
3	Mishandled Reports	- 5,034,486.57	- 4,820,411.53
4	Stolen Bags Percent	- 5,042,837.45	- 4,862,141.71
5	Proportion Ranges / 4	- 4,982,903.55	- 4,809,713.81
6	MTOW	- 5,008,669.60	- 4,845,623.42
7	Proportion Ranges / 2	- 4,975,962.05	- 4,838,138.10
8	Proportion Ranges / 1	- 5,026,005.50	- 4,888,288.43
9	Take off/land fixed cost	- 4,997,473.49	- 4,868,691.17
10	Proportion Ranges / 0	- 4,989,618.17	- 4,864,499.36