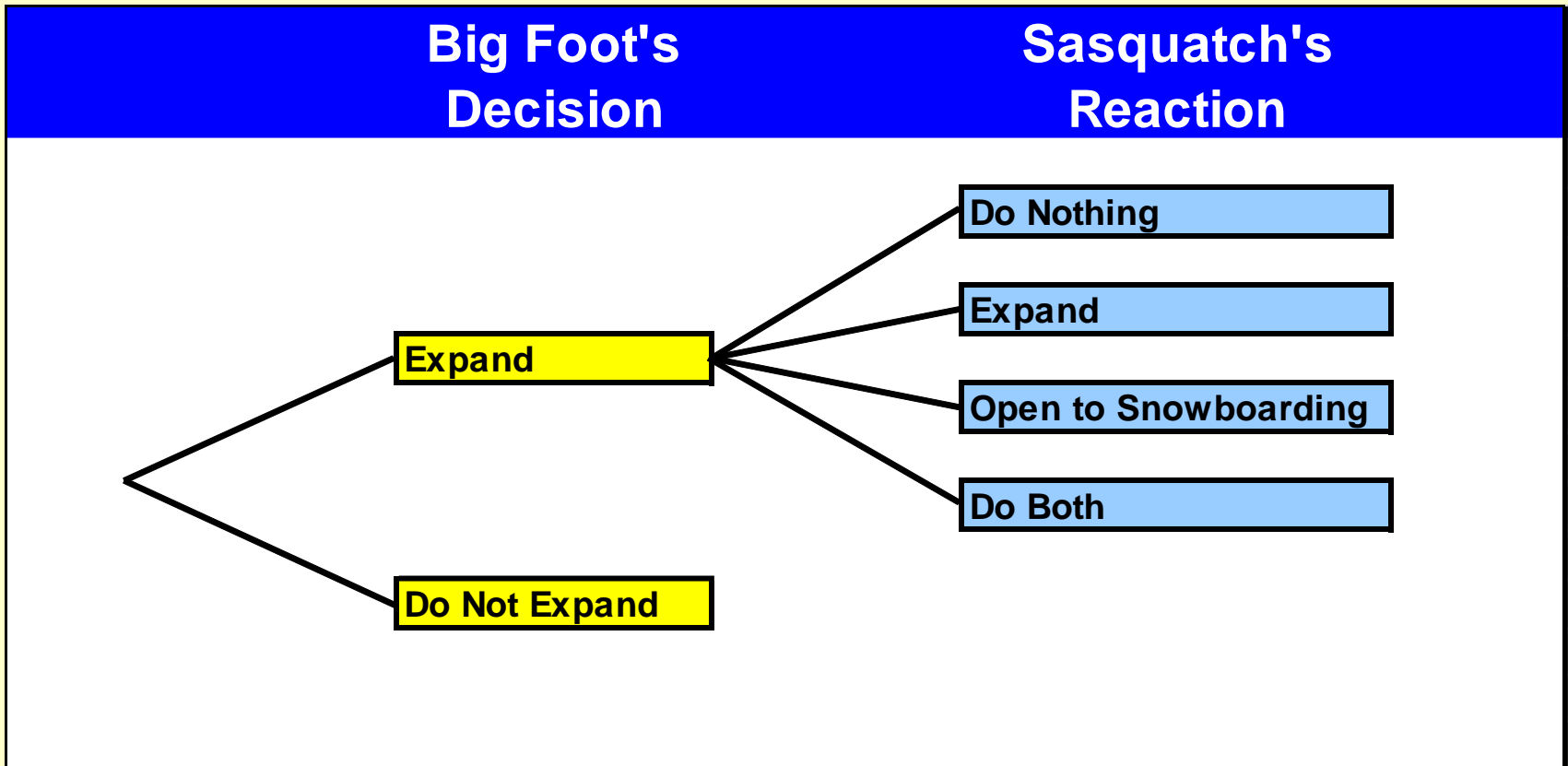


# Big Foot Resort

# Big Foot's Decision

- Whether to expand or not
  - The best course of action may depend on how a rival ski resort (Sasquatch Peak) reacts
- Sasquatch may expand, change focus, do both, or do neither.

# The Game Tree



# Building the Model

## Sasquatch Incremental Financials

Sasquatch Reaction	Do Nothing	Boarding	Expand	Both
Incremental Revenue	▼ (\$918,981)	\$751,200	\$4,217,337	\$4,231,760
Direct Costs	(\$609,100) ▲	\$525,840	\$2,795,251	\$2,687,168
S&A	\$0	\$300,000	\$700,000	\$750,000
Depreciation	\$0	\$0	\$650,000	\$650,000
Net Taxable Income	▼ (\$309,880)	(\$74,640)	\$72,086	\$144,592
Tax	▼ (\$108,458)	(\$26,124)	\$25,230	\$50,607
Net Income	▼ (\$201,422)	(\$48,516)	\$46,856	\$93,985
Cash Flow	▼ (\$201,422)	(\$48,516)	\$696,856	\$743,985
PV @ 8x	▼ (\$1,611,377)	(\$388,128)	\$5,574,847	\$5,951,880
Cost	\$0	\$0	\$6,500,000	\$6,500,000
NPV	▼ (\$1,611,377)	(\$388,128)	(\$925,153)	(\$548,120)

# Building the Model (cont.)

## Big Foot Incremental Financials Conditional on Sasquatch Reaction

Sasquatch Reaction	Do Nothing	Boarding	Expand	Both
Incremental Revenue	\$5,588,928	\$4,505,572	\$4,595,341	\$3,603,506
Direct Costs	\$3,912,250	\$3,063,789	\$3,216,739	\$2,450,384
S&A	\$500,000	\$600,000	\$600,000	\$500,000
Depreciation	\$500,000	\$500,000	\$500,000	\$500,000
Net Taxable Income	\$676,678	\$341,783	\$278,602	\$153,122
Tax	\$236,837	\$119,624	\$97,511	\$53,593
Net Income	\$439,841	\$222,159	\$181,091	\$99,529
Cash Flow	\$939,841	\$722,159	\$681,091	\$599,529
PV @ 8x	\$7,518,728	\$5,777,272	\$5,448,732	\$4,796,235
Cost	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000
NPV	\$2,518,728	\$777,272	\$448,732	(\$203,765)

# Evaluating the Game Tree (no uncertainty)

Big Foot's Decision	Sasquatch's Reaction	Value to Sasquatch	Value to Big Foot
<pre> graph LR     BF[Big Foot's Decision] --&gt; E[Expand]     BF --&gt; DNE[Do Not Expand]     E --&gt; DN[Do Nothing]     E --&gt; OS[Open to Snowboarding]     E --&gt; EX[Expand]     E --&gt; DB[Do Both]         </pre>	Do Nothing	(\$1,611,377)	\$2,518,728
	Open to Snowboarding	(\$388,128)	\$777,272
	Expand	(\$925,153)	\$448,732
	Do Both	(\$548,120)	(\$203,765)
	Do Not Expand		

# Introducing Uncertainty

- Estimates of uncertainty based on Exhibits 3 and 4, and on the text of the case.
  - Skiers per day
  - Incremental revenue per skier
  - Skiable days
  - Incremental direct cost percentage
  - Incremental S&A percentage
  - Cash flow multiplier (Sasquatch)
  - Cost of expansion (Big Foot)
- See Excel file

# Simulation Results

## Unconditional Simulation Results

**Trials = 10000**

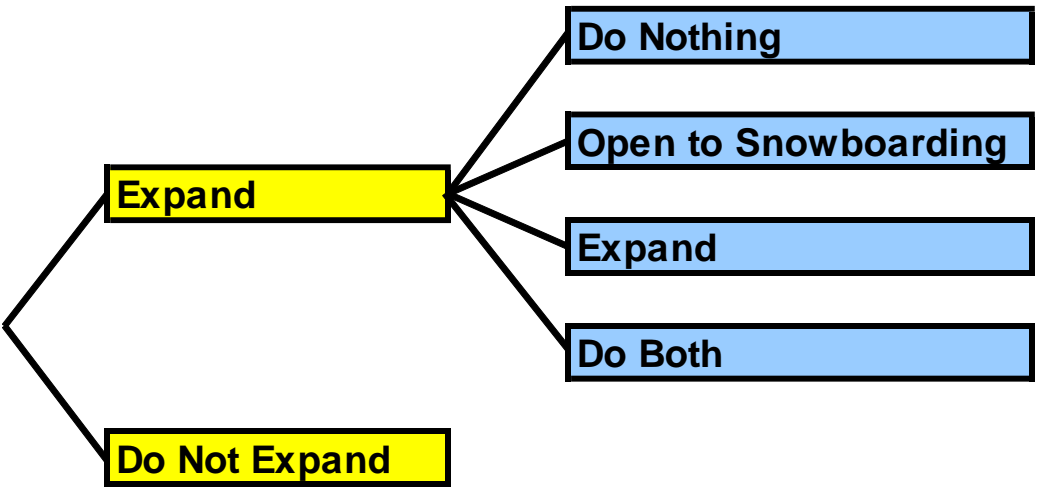
Venture.SIM

Output	Average	Median	Standard Deviation	Skewness
1 SP: Do nothing	(\$1,834,690)	(\$1,770,001)	\$1,864,161	-0.533
2 SP: Open to boarding	(\$454,929)	(\$442,303)	\$1,234,478	0.230
3 SP: Expand	(\$248,429)	(\$561,346)	\$3,174,038	0.472
4 SP: Do both	\$14,944	(\$403,555)	\$4,623,659	0.684
5 BF: If SP does nothing	\$2,534,769	\$2,426,027	\$1,446,400	0.122
6 BF: If SP opens to boarding	\$792,378	\$716,887	\$1,848,243	0.487
7 BF: If SP expands	\$442,449	\$378,908	\$1,480,588	0.404
8 BF: If SP does both	(\$175,314)	(\$333,752)	\$2,238,155	0.319

Percentiles				
Minimum	25%	50%	75%	Maximum
(\$13,274,898)	(\$2,928,993)	(\$1,770,001)	(\$626,470)	\$5,258,317
(\$5,524,330)	(\$1,290,534)	(\$442,303)	\$313,661	\$4,754,334
(\$10,044,243)	(\$2,542,474)	(\$561,346)	\$1,811,721	\$13,098,868
(\$16,299,580)	(\$3,219,125)	(\$403,555)	\$2,549,154	\$26,995,604
(\$1,930,345)	\$1,461,050	\$2,426,027	\$3,573,581	\$7,912,857
(\$4,820,373)	(\$582,627)	\$716,887	\$1,954,054	\$9,282,452
(\$4,063,064)	(\$603,423)	\$378,908	\$1,364,493	\$7,650,074
(\$8,428,741)	(\$1,789,604)	(\$333,752)	\$1,275,344	\$11,501,300



# Evaluating the Game Tree (with uncertainty)

Big Foot's Decision	Sasquatch's Reaction	Value to Sasquatch	Value to Big Foot
 <pre> graph LR     A[Expand] --- B[Do Nothing]     A --- C[Open to Snowboarding]     A --- D[Expand]     A --- E[Do Both]     F[Do Not Expand]           </pre>		<p>\$1,834,690</p> <p>(\$454,929)</p> <p>(\$248,429)</p>	<p>\$2,534,769</p> <p>\$792,378</p> <p>\$442,449</p>
		<p><b>\$14,944</b></p>	<p><b>(\$175,314)</b></p>

# Discussion

- Why does incorporating the uncertainty change the conclusion?
- How would you address the concern that Sasquatch might have different estimates of value
- Are the differences in risk of the different scenarios adequately considered? What might you do differently?
- If you were Sasquatch and Big Foot had not yet committed to expand, what might you want to do?