

American Capital Strategies (Ticker: ACAS)
September 7, 2007
Black-Scholes Option Pricing Model (OPM) & Monte Carlo Simulation

OPM & Monte Carlo Discussion & Analysis:

The enclosed analysis captures the Black-Scholes option pricing model (OPM) using actual ACAS stock prices for one year, through Friday, September 7, 2007. Also enclosed are the results of a Monte Carlo simulation analysis based on the OPM. Monte Carlo is a statistical technique used to imitate real-life, uncertain situations (i.e., the holding period and price when employees are most likely to exercise their options). In particular, the interplay among vesting, the stock price, and early exercise can all be built into the Monte Carlo simulation rather than specified as assumptions. For the purpose of this exercise, the model includes four possible stock prices, four possible exercise years, and a weighted probability for each simulation (i.e., A 50% probability that employee options will be exercised at \$45 per share within 2 years of vesting period.)

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OPM Input	Value	Source
Current Stock Price	\$ 38.65	Finance.yahoo.com
Exercise Price	\$ 38.65	ACAS Assumption
Option Life @ Exercise	5	ACAS Assumption
Risk-Free Rate	4.24%	Treasurydirect.gov
Annualized Standard Deviation	0.26952	Derived from stock returns
Variance of Stock Returns	0.07264	Derived from stock returns
D ₁	0.55	
D ₁ (Normal Distribution Value)	0.7091	
D ₂	-0.05	
D ₂ (Normal Distribution Value)	0.4793	
Value of Call Option	\$ 12.42	

Monte Carlo Simulation Summary

Summary Information	
Workbook Name	Black Scholes_ACAS
Number of Simulations	4
Number of Iterations	100
Number of Inputs	2
Number of Outputs	1
Sampling Type	Monte Carlo
Simulation Start Time	9/10/2007 20:44
Simulation Stop Time	9/10/2007 20:44
Simulation Duration	00:00:01
Random Seed	37417006

Output			Statistics						
Name	Cell	Sim	Minimum	Mean	Maximum	x1	p1	x2	p2
Value of Call Option	B19	1	\$ 7.31	\$ 10.40	\$ 18.09	\$ 8.22	5%	\$ 16.07	95%
Value of Call Option	B19	2	\$ 7.31	\$ 10.40	\$ 18.09	\$ 8.22	5%	\$ 16.07	95%
Value of Call Option	B19	3	\$ 7.31	\$ 10.40	\$ 18.09	\$ 8.22	5%	\$ 16.07	95%
Value of Call Option	B19	4	\$ 7.31	\$ 10.40	\$ 18.09	\$ 8.22	5%	\$ 16.07	95%

Input			Statistics						
Name	Cell	Sim	Minimum	Mean	Maximum	x1	p1	x2	p2
Current Stock Price	B7	1	38.650002	42.1595	50	40	5%	45	95%
Current Stock Price	B7	2	38.650002	42.1595	50	40	5%	45	95%
Current Stock Price	B7	3	38.650002	42.1595	50	40	5%	45	95%
Current Stock Price	B7	4	38.650002	42.1595	50	40	5%	45	95%
Option Life @ Exercise	B9	1	2	2.3	5	2	5%	4	95%
Option Life @ Exercise	B9	2	2	2.3	5	2	5%	4	95%
Option Life @ Exercise	B9	3	2	2.3	5	2	5%	4	95%
Option Life @ Exercise	B9	4	2	2.3	5	2	5%	4	95%