

Assignment 2 - V703

Financial Modeling Valuation

18/01/2007

- 1.** Using weekly stock prices for a period of 1 year, compute the expected return μ and the volatility σ for Dell Inc., assuming that its stock follows a geometric Brownian motion.
- 2.** Use the results of the previous exercise, construct a binomial tree that approximates the future evolution of Dell stock prices from January 19 to May 18, 2007, using $n = 6$ time steps.
- 3.** Use the tree of the previous exercise to price a European call option on Dell stock with maturity on May 18, 2007, and strike price $K = 17.50$. Compare it with the actual transacted value on January 19, 2007, for an American call option on Dell stock with the same strike price and maturity date (note: Dell does not pay dividends to its share holders).
- 4.** Repeat the previous exercise for both American and European put options on Dell stock with the same maturity and strike price $K = 32.50$.