Using Excel in Derivatives
MSc in Banking & Finance
Athens University of Economics & Business
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Aims and objectives:

These lectures contain Excel tutorial examples on various topics in financial Derivatives. Students will learn Excel topics range from simple issues such as computing sum, average, median and standard deviation, to advanced issues such as Black-Scholes and Binomial option pricing models, probability distribution random numbers generator, Monte Carlo Simulation.

Course outline:

1. *Statistics in Finance*
   Calculation of the mean, median, standard deviation, higher moments, generation of random numbers from a normal distribution given the standard deviation and the mean.
2. *Black-Scholes Option Pricing Model*
   In this example, we derived call and put option price based on the Black-Scholes model. The function procedures are used.
3. *Binomial Option Pricing Model*
   In this example, we derived call and put option price using the binomial model, also known as the Cox-Ross-Rubinstein option model. Note that binomial distribution will become normal when the number of steps (n) becomes large.
4. *Monte Carlo Simulation*
   A Monte Carlo method is a computational algorithm that relies on repeated random sampling to compute its results. Monte Carlo methods are often used to estimate the price of a European option.