ABSTRACT

MUHAMAD SYAZALI. American Put Option Pricing by Monte Carlo Simulation. Under supervision of ENDAR H. NUGRAHANI and RETNO BUDIARTI

An American option is an option that can be exercised at the strike price anytime before or on the date of expiration. In this thesis, Monte Carlo simulation for valuation of American option is presented. Monte Carlo simulation is one of the numerical methods used to determine the price of American options. The simulation provides several examples of initial stock price $S$, rate of interest $r$, exercise time $T$, volatility $\sigma$, and strike price $K$. The simulation study shows the cost of the option $c$ decreases when $S$ increases, $c$ decreases when $r$ increases, $c$ increases when $T$ increases, $c$ increases when $\sigma$ increases, and $c$ increases when $K$ increases.

Keywords: American Options, Black-Scholes Formula, Monte Carlo Simulation.