ABSTRACT

Sale of shares became a very important concern among shareholders or equity investors. Problems frequently encountered by the investors is optimal selling rules. With the approach of the analytical method and be assisted by the genetic algorithm method, the optimal selling rules problem can be analyzed and the results of the calculation can be a decision analysis for investors. The overall aim of this final task is to get the optimal determination of selling rules and genetic algorithm. Basic steps of optimal selling rules is brown geometric motion method combined with Markov chain method. To create optimal selling rules, the parameters for calculating the target price and stop loss limit would gained by making an interval in advance. These parameters is for maximize the reward functions as the objective function. In the genetic algorithm, the selected parameters to maximize the reward function is z_1 and z_2 with intervals that have been made. z_1 to calculate stop loss limits and z_2 to calculate the target price. In this final task also calculated the approximate hold time to sale the shares (expected holding time) as well as the benefit probability and the losses probability for future capital investment plans. The results obtained by using a genetic algorithm that is when interest rates are set and the value is changed. Target price does not depend on the discount factor, or interest rate due at the process of the genetic algorithm the result has reached the optimal point, while the stop loss limit will depending on interest rates. For the expected holding time with the benefit and losses probability also depending on interest rates.

Keywords : *Geometric Brownian Motion, Markov Chain, Optimal Selling Rules, Genetic Algorithm*