In the current study, we consider a single stock whose effective price observes a switching geometric Brownian motion and that it pays no dividends in the current study. Given the current price of a stock, the selling-off axiom is configured consists of a target price and a stop-loss limit. A “Sell...” decision is made when the target price reaches either the target price setting is reached or the set stop-loss limit is reached. However, in reality, one often purchases the bad wrong stock or the purchase made is at the wrong time—in reality. In such cases, it is necessary to sell it sooner as soon as possible to stop loss. In practice, a target price is typically around a gain of 15%—55% to 55%, and a stop-loss limit generally varies from 5% to 20%. It is, however, not a good idea to adopt uniform profit-taking. Each stock is different, and has its own characteristics, and Moreover, it should be treated differently with different rules of liquidation rules.

In this study, we also consider a set of target prices and stop-loss limits, and choose target price and a stop-loss limit in that set to enhance expected an expected reward function. In addition, we aim at deriving these price limits. In addition, we get obtain the expected target period that is expected and the probability of making and losing money to make money. In practice, the most commonly frequently used criteria in fact, for measuring the performance of the portfolio is the percentage return rate per unit time. However, such a criterion has lead to many leads to frequent transactions because it encourages small profit-taking within the short holding time. Clearly, such a criterion is not suitable to retail investors. The reason for this is because of the limited time available for trading and additional transaction costs. A discount factor, in contrast, rules out very frequent transactions because the time factor is replaced by a discount rate. Such a discounted reward function is natural in many financial problems.