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Option Pricing with Tree Model in View of Hedging

by

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The Black Scholes model is a simple and popular way to model asset price process and explicit formulae of many options have already been found. They can give us better understanding and further insight about the characteristic of the options. However, there are still many derivatives for which the explicit solutions are unknown or the explicit solutions themselves require numerical methods to approximate their values. Different numerical methods are introduced to find the price of options directly, one is the tree model. Under no arbitrage assumption, pricing is equivalent to hedging. Here, we would first focus on the trinomial tree model and look at the pricing problem in view of hedging. A square payoff derivative is introduced so as to provide another view of option pricing in trinomial tree model. Further analysis on tree models would also be given.

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