

An ETD method for multi-asset American option pricing under jump-diffusion model

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Abstract

In this paper we propose a numerical method for American multi-asset options under jump-diffusion model based on the combination of the exponential time differencing (ETD) technique for the differential operator and Gauss-Hermite quadrature for the integral term. In order to simplify the computational stencil and improve characteristics of the ETD-scheme mixed derivative eliminating transformation is applied. The results are compared with recently proposed methods.

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