

学术论文

跳跃---扩散型欧式加权几何平均价格亚式期权定价

魏正元

复旦大学管理学院统计学系 重庆工学院数理学院

收稿日期 修回日期 网络版发布日期:

摘要 在亚式期权定价理论的基础上,对期权的标的资产价格引入跳跃---扩散过程进行建模,用几何Brown运动描述其常态连续变动,用Poisson过程刻画资产价格受新信息和稀有偶发事件的冲击发生跳跃的记数过程,用对数正态随机变量描述跳跃对应的跳跃幅度,在模型限定下运用Ito-Skorohod微分公式和等价鞅测度变换,导出欧式加权几何平均价格亚式期权封闭形式的解析定价公式

关键词 [加权几何平均, 亚式期权, 期权定价](#)

分类号

Pricing for European Weighted Geometric Average Value Asian Option

Wei Zhengyuan

Department of Statistics, Management School of Fudan University; College of Mathematica Scientia, ChongQing Institute of Technology

Abstract Based on the theory of Asian option valuation, we established a model for underlying asset price with a mixed diffusion process involving source of jump. Continuous component is modeled as geometric Brown motion to characterize its "normal" revolution and discontinuous component is modeled as jump with a Poisson process in conjunction with random jump size, and jump size has a log-normal distribution. By applying It^o-Skorohod formula and equivalent martingale measure transformation within the framework of our model, we derived a closed form analytic solution for European weighted geometric average value Asian option, in addition to that, some other general forms are discussed.

扩展功能
本文信息
▶ Supporting info
▶ PDF(596KB)
▶ [HTML全文](0KB)
▶ 参考文献
服务与反馈
▶ 把本文推荐给朋友
▶ 复制索引
▶ Email Alert
▶ 文章反馈
▶ 浏览反馈信息
相关信息
▶ 本刊中 包含“加权几何平均, 亚式期权, 期权定价”的 相关文章
▶ 本文作者相关文章
· 魏正元

Key words

DOI

通讯作者 魏正元 [魏正元](#)