

应用数学,统计学

基于GARCH-NIG模型和动态Copula的双标的型期权定价(英文)

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摘要 结合动态copula和GARCH模型,发展了双标的型未定权益的定价方法.针对诸如非对称、尖峰态和厚尾现象等各种金融中的固有因素,采用NIG分布拟合于残差量.而标的资产之间的相关结构由动态copula来刻画.以上海证券指数和深圳证券指数为双标的资产最大认购期权为例,理论方法得到了有效的实证结果.

关键词 [最大认购期权](#) [GARCH过程](#) [NIG分布](#) [copula](#) [动态copula](#)

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Bivariate option pricing with GARCH-NIG model and dynamic copula (English)

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Abstract

GARCH process was developed with the combination of dynamic copula for pricing bivariate contingent claims. In order to take into account the stylized factors in finance, such as skewness, leptokurtosis and fat tails, NIG distribution was fitted for residuals. Furthermore, the dynamic copula method was applied to describe the dependence structure between the underlying assets. The approach was illustrated with call-on-max option of Shanghai and Shenzhen Stock Composite Indices. The results showed the advantage of the suggested approach.

Key words [call-on-maxoption](#) [GARCH process](#) [NIG distribution](#) [copula](#) [dynamic copula](#)

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