论文

基于随机便利收益的不完全市场商品期货定价研究

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Research on the Incompletely Commodity Future Pricing Based on the Random Convenience Yield

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- 摘要
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摘要 商品的弱流动性导致了商品期货市场的不完全性。本文在现有商品便利收益期货定价模型的基础上,考虑了商品期货市场的不完全性及现货价格的Poisson跳跃过程,运用随机贴现因子与随机便利收益将商品现货价格与期货价格连接,提出了随机便利收益下期货市场不完全性的期货定价模型。为检验模型的适用性,利用上海期货交易所五只铜期货合约的交易数据对模型进行实证,并估计不完全参数,结果表明由于不完全性而导致的期货市场部分波动应主要归因于商品的随机便利收益。

关键词: 随机便利收益   不完全市场   随机贴现

Abstract: Based on the convenience yield a commodity futures pricing model is proposed, by which the imperfection and the Poisson jump of the spot price by the linking of the random discount rate and the convenience yield are discussaed. The parameters are estimated by the Kalman filter and maximum likelihood estimator. To test the practicability, the sample of the cooper futures of Shanghai Futures Exchange is used and the empirical evidence is given. The results indicate that the volatility on the futures market caused by the incomplete ness should be attributed to the random convenience yield.

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