

数学与系统科学研究院

计算数学所学术报告

报告人: **Prof. Yongmin Zhang**

(*Nottingham Business School China, Centre for Global Finance*)

报告题目:

**Liquidity-Adjusted Real Options and
Futures Pricing Model**

邀请人: 石钟慈 院士

报告时间: 2016年5月6日 (周五)

下午 16:30-17:30

报告地点: 科技综合楼三层

311 报告厅

Abstract:

In this talk proposes a new model introducing liquidity risk factors into the real option and futures pricing model. Our model is validated for oil futures data by comparing the errors from both the new liquidity-adjusted model and the classical model without liquidity adjustment. Empirically, we find that the liquidity-adjusted futures pricing model is more accurate than the classical model and the improvement rate is approximately 30%. We also discover a coupling effect of liquidity and maturity through a theoretical study on solutions of partial differential equations with various inputs of liquidity levels and maturities. Our two-dimensional PDE models has been extended to solve real options with liquidity adjustment. We present numerical simulations and sensitivity analysis for the liquidity model parameters. The study of new real options model reveals the effects of asset illiquidity towards investment threshold and flexibility values, namely, the exercise boundary and the real options values.

简介:

Yongmin Zhang, Chair Professor in Finance at University of Nottingham Ningbo China and Director of Centre for Global Finance and International Finance Research Centre. He obtained his Ph.D. from University of Chicago in 1997. After his graduation, he worked as a research scientist at Research Foundation of State University of New York. From 2001 to 2007, he was a Ph.D. supervisor at State University of New York at Stony Brook and a principle investigator for U.S. Department of Energy research projects. From 2007 to 2011, he has worked as a lead research analyst at J. P. Morgan, a risk management consultant at Wells Fargo, a Ph.D. supervisor in financial mathematics at Xi'an Jiaotong – Liverpool University, the academic director for Qinlan Program of Jiangsu Province. Since 2012, he has been a leader for “Global Finance Management” which is one of key disciplines in universities in Zhejiang Province.

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