

<<论波动率模型>>

图书基本信息

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内容概要

本书基于笔者于伦敦帝国理工学院和三菱UFJ证券国际（伦敦）的联合项目中所完成的金融数学博士论文。该联合项目始于2005年年底，旨在探讨随机波动率在股票、外汇、利率等金融资产的建模中的应用以及基于此模型之上对金融衍生品的定价。

随机（非常量）的波动率模型是近些年来热门的金融数学研究方向，特别是在2008年金融危机动荡的市场中更是受到了学术界和金融业界的熏视，本书最大的贡献在于提供了当前最全面的随机金融模型架构，包括随机波动率、局部波动率、随机利率以及跳跃过程对外汇走势的建模，以及对金融衍生品（欧式期权）定价的半解析解。

其他几个章节涉及了对另外的波动率模型的提出和讨论，以及随机波动率模型在金融业界中的实际应用和衍生品定价的范例。

笔者利用跨学术和金融业界的优势，为大家展现了国际金融工程学术研究和金融衍生品发展的最前沿画卷。

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媒体关注与评论

Cong Yi investigates a variety of models for Stochastic Volatility. The book is organised by discussing results first and proofs later. The aim of the book, and the aim of the author, is to produce something useful. The first chapter looks at a changing volatility model where the volatility is constant between stopping times. This is of considerable theoretical interest and can be extended to a class of bounded path wise continuous volatilities. Subsequent Chapters, 2,3, visit Local stochastic Volatility Models and apply these in FX looking at specific classes of financial products. I think these chapters will be of considerable interest to practitioners and, perhaps, also the Monte -Carlo method discussed in Chapter 4. The final chapter looks at a heavyweight Libor market model incorporating Stochastic Volatility and Jumps. Formal expressions for the prices of Caplets and Swaptions are found here but Cong Yi, suggest that the real difficulties lie in the efficient greek computation, which may serve as future research topic.

—— Dr, Chris Barnett Distinguished Research Fellow, Mathematical Finance, Imperial College London

When Cong Yi was a PhD student of Imperial College, he was sponsored by Mitsubishi UFJ Securities International and worked part time at the department of Risk and Product Development under the guidance of me. (I am director and Head of Product Development.) His main research at the bank is to investigate models with more advanced features and capabilities to reflect market conditions and movements than the standard Black Scholes theory. This work is of great interest in both academic research and practical application. A large part of his PhD thesis is based on this research, coupled with some other fundamental theoretical explorations in finance. I believe his thesis will attract broad readers.

—— Dr. Yanmin Li President of Chinese Association of Financial Executives

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