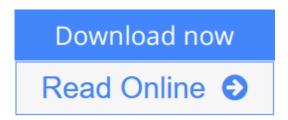# Option Pricing and Estimation of Financial Models with R

By Stefano M. Iacus

Option Pricing and Estimation of Financial Models with R By Stefano M. Iacus

Presents inference and simulation of stochastic process in the field of model calibration for financial times series modelled by continuous time processes and numerical option pricing. Introduces the bases of probability theory and goes on to explain how to model financial times series with continuous models, how to calibrate them from discrete data and further covers option pricing with one or more underlying assets based on these models.

Analysis and implementation of models goes beyond the standard Black and Scholes framework and includes Markov switching models, Lévy models and other models with jumps (e.g. the telegraph process); Topics other than option pricing include: volatility and covariation estimation, change point analysis, asymptotic expansion and classification of financial time series from a statistical viewpoint.

The book features problems with solutions and examples. All the examples and R code are available as an additional R package, therefore all the examples can be reproduced.

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Editorial Review

From the Back Cover
Option Pricing and Estimation of Financial Models with R

Stefano M. Iacus, Department of Economics, Business and Statistics, University of Milan, Italy

The aim of this book is twofold. The first goal is to summarize elementary and advanced topics on modern option pricing: from the basic models of the Black & Scholes theory to the more sophisticated approach based on Lévy processes and other jump processes.

At the same time, the other goal of the book is to identify, estimate and justify, with the use of statistically sound techniques, the choice of particular financial models starting from real financial data.

In the spirit of modern finance, this book considers only continuous time models like diffusion of Lévy processes. Therefore, the statistical techniques presented are those designed to work on real discrete time data obtained from these continuous time models.

Key Features:

- Provides a comprehensive and in-depth guide to financial modeling.
- Looks at basic and advanced option pricing with R.
- Explores simulation of multidimensional stochastic differential equations with jumps.
- Provides a comprehensive survey on empirical finance in the R statistical environment.
- Addresses model selection and identification of financial models from empirical financial data.

This book is an invaluable resource for post graduate students and researchers in economics, mathematics and statistics who want to approach mathematical finance from an applied point of view. Statisticians and data analysts working in a field related to finance will also benefit from this book.

Users Review

From reader reviews:

Teresa Vanhook:

This book untitled Option Pricing and Estimation of Financial Models with R to be one of several books that will best seller in this year, honestly, that is because when you read this book you can get a lot of benefit on it. You will easily to buy this kind of book in the book retailer or you can order it via online. The publisher in this book sells the e-book too. It makes you quicker to read this book, as you can read this book in your Smartphone. So there is no reason for your requirements to past this e-book from your list.

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Julie Long:

In this particular era which is the greater particular person or who has ability to do something more are more important than other. Do you want to become one among it? It is just simple strategy to have that. What you must do is just spending your time not much but quite enough to possess a look at some books. One of many books in the top record in your reading list is definitely Option Pricing and Estimation of Financial Models with R. This book and that is qualified as The Hungry Inclines can get you closer in turning out to be precious person. By looking upward and review this book you can get many advantages.

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