Abstract:

© 2003 John Wiley & Sons Ltd. All rights reserved. Financial mathematics has recently enjoyed considerable interest on account of its impact on the finance industry. In parallel, the theory of Lévy processes has also seen many exciting developments. These powerful modelling tools allow the user to model more complex phenomena, and are commonly applied to problems in finance. Lévy Processes in Finance: Pricing Financial Derivatives takes a practical approach to describing the theory of Lévy-based models, and features many examples of how they may be used to solve problems in finance. Provides an introduction to the use of Lévy processes in finance. Features many examples using real market data, with emphasis on the pricing of financial derivatives. Covers a number of key topics, including option pricing, Monte Carlo simulations, stochastic volatility, exotic options and interest rate modelling. Includes many figures to illustrate the theory and examples discussed. Avoids unnecessary mathematical formalities. The book is primarily aimed at researchers and postgraduate students of mathematical finance, economics and finance. The range of examples ensures the book will make a valuable reference source for practitioners from the finance industry including risk managers and financial product developers.

Lévy processes in finance: pricing financial derivatives

Lévy Processes in Finance: Theory, Numerics, and Empirical Facts. Dissertation zur Erlangung des Doktorgrades der Mathematischen Fakultät. der Albert-Ludwigs-Universität Freiburg i. Br. Lévy processes are an excellent tool for modelling price processes in mathematical nance. On the one hand, they are very exible, since for any time increment Δt any in nitely divisible distribution can be chosen as the increment distribution over periods of time Δt. On the other hand, they have a simple structure in comparison with general semimartingales.