Since around the turn of the millennium there has been a general acceptance that one of the more practical improvements one may make in the light of the shortfalls of the classical Black-Scholes model is to replace the underlying source of randomness, a Brownian motion, by a Lévy process. Working with Lévy processes allows one to capture desirable distributional characteristics in the stock returns. In addition, recent work on Lévy processes has led to the understanding of many probabilistic and analytical properties, which make the processes attractive as mathematical tools. At the same time, exotic derivatives are gaining increasing importance as financial instruments and are traded nowadays in large quantities in OTC markets. The current volume is a compendium of chapters, each of which consists of discursive review and recent research on the topic of exotic option pricing and advanced Lévy markets, written by leading scientists in this field.

In recent years, Lévy processes have leapt to the fore as a tractable mechanism for modeling asset returns. Exotic option values are especially sensitive to an accurate portrayal of these dynamics. This comprehensive volume provides a valuable service for financial researchers everywhere by assembling key contributions from the world's leading researchers in the field. Peter Carr, Head of Quantitative Finance, Bloomberg LP.

This book provides a front-row seat to the hottest new field in modern finance: options pricing in turbulent markets. The old models have failed, as many a professional investor can sadly attest. So many of the brightest minds in mathematical finance across the globe are now in search of new, more accurate models. Here, in one volume, is a comprehensive selection of this cutting-edge research.
Richard L. Hudson, former Managing Editor of The Wall Street Journal Europe, and co-author with Benoit B. Mandelbrot of The (Mis)Behaviour of Markets: A Fractal View of Risk, Ruin and Reward

ABOUT THE AUTHOR

ANDREAS KYPRIANOU has a degree in Mathematics from Oxford University and a PhD in Probability Theory from Sheffield University. He has held academic positions in Mathematics and Statistics departments at The London School of Economics, Edinburgh University, Utrecht University and, currently, Heriot Watt University. He has also worked for nearly two years as a research mathematician with Shell International Exploration and Production. His research interests are focused on pure and applied probability with recent focus on Lévy processes. He has taught a range of courses on Probability Theory, Stochastic Analysis, Financial Stochastics and Lévy Processes for the Amsterdam-Utrecht Masters programme in Stochastics and Financial Mathematics and the MSc programme in Financial Mathematics at Edinburgh.

WIM SCHOUTENS has a degree in Computer Science and a PhD in Science, Mathematics. He is a research professor in the Department of Mathematics at the Catholic University of Leuven, Belgium. He has been a consultant to the banking industry and is author of the Wiley book Lévy Processes in Finance: Pricing Financial Derivatives. His research interests are focused on financial mathematics and stochastic processes. He currently teaches several courses related to financial engineering in different Masters programmes.

PAUL WILMOTT has undergraduate and DPhil degrees in Mathematics. He has written over 100 articles on mathematical modeling and finance, as well as internationally acclaimed books including Paul Wilmott on Quantitative Finance published by John Wiley & Sons. Paul has extensive consulting experience in quantitative finance with leading US and European financial institutions. He has founded a university degree course and the popular Certificate in Quantitative Finance. Paul also manages wilmott.com.

For additional product details, please visit https://www.wiley.com/en-us