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Soggetti	Statistics Economics, Mathematical Financial engineering Econometrics Risk management Macroeconomics Statistics for Business, Management, Economics, Finance, Insurance Quantitative Finance Financial Engineering Risk Management Macroeconomics/Monetary Economics//Financial Economics
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Nota di contenuto	Preface to the Fifth Edition -- Part I Option Pricing -- Derivatives -- Introduction to Option Management -- Basic Concepts of Probability Theory -- Stochastic Processes in Discrete Time -- Stochastic Integrals and Differential Equations -- Black–Scholes Option Pricing Model -- Binomial Model for European Options -- American Options -- Exotic Options -- Interest Rates and Interest Rate Derivatives -- Part II Statistical Models of Financial Time Series -- Introduction: Definitions and Concepts -- ARIMA Time Series Models -- Time Series with Stochastic Volatility -- Long Memory Time Series -- Non-Parametric and Flexible Time Series Estimators -- Part III Selected Financial

Applications -- Value at Risk and Backtesting -- Copulae and Value at Risk -- Statistics of Extreme Risks -- Neural Networks and Deep Learning -- Volatility Risk of Option Portfolios -- Nonparametric Estimators for the Probability of Default -- Credit Risk Management and Credit Derivatives -- Financial econometrics of Crypto-currencies -- A Technical Appendix -- Index -- Symbols and Notations.

Sommario/riassunto

Now in its fifth edition, this book offers a detailed yet concise introduction to the growing field of statistical applications in finance. The reader will learn the basic methods for evaluating option contracts, analyzing financial time series, selecting portfolios and managing risks based on realistic assumptions about market behavior. The focus is both on the fundamentals of mathematical finance and financial time series analysis, and on applications to specific problems concerning financial markets, thus making the book the ideal basis for lectures, seminars and crash courses on the topic. All numerical calculations are transparent and reproducible using quantlets. For this new edition the book has been updated and extensively revised and now includes several new aspects such as neural networks, deep learning, and crypto-currencies. Both R and Matlab code, together with the data, can be downloaded from the book's product page and the Quantlet platform. The Quantlet platform quantlet.de, quantlet.com, quantlet.org is an integrated QuantNet environment consisting of different types of statistics-related documents and program codes. Its goal is to promote reproducibility and offer a platform for sharing validated knowledge native to the social web. QuantNet and the corresponding Data-Driven Documents-based visualization allow readers to reproduce the tables, pictures and calculations inside this Springer book. "This book provides an excellent introduction to the tools from probability and statistics necessary to analyze financial data. Clearly written and accessible, it will be very useful to students and practitioners alike." Yacine Ait-Sahalia, Otto Hack 1903 Professor of Finance and Economics, Princeton University.
