1. Record Nr. UNINA9910438137903321 Autore Albrecher Hansjoerg **Titolo** Introduction to Quantitative Methods for Financial Markets / / by Hansjoerg Albrecher, Andreas Binder, Volkmar Lautscham, Philipp Mayer Basel:,: Springer Basel:,: Imprint: Birkhäuser,, 2013 Pubbl/distr/stampa **ISBN** 3-0348-0519-5 Edizione [1st ed. 2013.] Descrizione fisica 1 online resource (IX, 191 p. 48 illus., 10 illus. in color.) Collana Compact Textbooks in Mathematics, , 2296-4568 Disciplina 519 Soggetti Game theory Economic theory Economics, Mathematical Game Theory, Economics, Social and Behav. Sciences Economic Theory/Quantitative Economics/Mathematical Methods Quantitative Finance Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Bibliographic Level Mode of Issuance: Monograph Note generali Nota di contenuto I Interest Rates -- II Financial Products -- III The No-Arbitrage Principle -- IV European and American Options -- The Binomial Option Pricing Model -- VI The Black-Scholes Model -- VII The Black-Scholes Formula -- VIII Stock-Price Models -- IX Interest Rate Models and the Valuation of Interest Rate Derivatives -- X Numerical Tools -- XI Simulation Methods -- XII Calibrating Models - Inverse Problems -- XIII Case Studies: Exotic Derivatives -- XIV Portfolio-Optimization -- XV Introduction to Credit Risk Models. Sommario/riassunto Swaps, futures, options, structured instruments - a wide range of derivative products is traded in today's financial markets. Analyzing, pricing and managing such products often requires fairly sophisticated quantitative tools and methods. This book serves as an introduction to financial mathematics with special emphasis on aspects relevant in practice. In addition to numerous illustrative examples, algorithmic implementations are demonstrated using "Mathematica" and the

software package "UnRisk" (available for both students and teachers).

The content is organized in 15 chapters that can be treated as

independent modules. In particular, the exposition is tailored for classroom use in a Bachelor or Master program course, as well as for practitioners who wish to further strengthen their quantitative background.