

1. Record Nr.	UNINA9910777394403321
Autore	Lyuu Yuh-Dauh
Titolo	Financial engineering and computation : principles, mathematics, algorithms // Yuh-Dauh Lyuu [[electronic resource]]
Pubbl/distr/stampa	Cambridge : , : Cambridge University Press, , 2002
ISBN	1-139-93089-3 1-107-12041-1 1-280-42980-1 0-511-17591-4 0-511-04094-6 0-511-15660-X 0-511-32262-3 0-511-54683-1 0-511-04606-5
Descrizione fisica	1 online resource (xix, 627 pages) : digital, PDF file(s)
Disciplina	332.6/01/51
Soggetti	Financial engineering Investments - Mathematical models Derivative securities - Mathematical models
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Title from publisher's bibliographic system (viewed on 05 Oct 2015).
Nota di bibliografia	Includes bibliographical references (p. 553-583) and index.
Nota di contenuto	Cover; Half-title; Title; Copyright; Dedication; Contents; Preface; Useful Abbreviations; CHAPTER ONE Introduction; CHAPTER TWO Analysis of Algorithms; CHAPTER THREE Basic Financial Mathematics; CHAPTER FOUR Bond Price Volatility; CHAPTER FIVE Term Structure of Interest Rates; CHAPTER SIX Fundamental Statistical Concepts; CHAPTER SEVEN Option Basics; CHAPTER EIGHT Arbitrage in Option Pricing; CHAPTER NINE Option Pricing Models; CHAPTER TEN Sensitivity Analysis of Options; CHAPTER ELEVEN Extensions of Options Theory; CHAPTER TWELVE Forwards, Futures, Futures Options, Swaps CHAPTER THIRTEEN Stochastic Processes and Brownian Motion CHAPTER FOURTEEN Continuous-Time Financial Mathematics; CHAPTER FIFTEEN Continuous-Time Derivatives Pricing; CHAPTER SIXTEEN

Hedging; CHAPTER SEVENTEEN Trees; CHAPTER EIGHTEEN Numerical Methods; CHAPTER NINETEEN Matrix Computation; CHAPTER TWENTY Time Series Analysis; CHAPTER TWENTY-ONE Interest Rate Derivative Securities; CHAPTER TWENTY-TWO Term Structure Fitting; CHAPTER TWENTY-THREE Introduction to Term Structure Modeling; CHAPTER TWENTY-FOUR Foundations of Term Structure Modeling CHAPTER TWENTY-FIVE Equilibrium Term Structure Models CHAPTER TWENTY-SIX No-Arbitrage Term Structure Models; CHAPTER TWENTY-SEVEN Fixed-Income Securities; CHAPTER TWENTY-EIGHT Introduction to Mortgage-Backed Securities; CHAPTER TWENTY-NINE Analysis of Mortgage-Backed Securities; CHAPTER THIRTY Collateralized Mortgage Obligations; CHAPTER THIRTY-ONE Modern Portfolio Theory; CHAPTER THIRTY-TWO Software; CHAPTER THIRTY-THREE Answers to Selected Exercises; Bibliography; Glossary of Useful Notations; Index

Sommario/riassunto

Students and professionals intending to work in any area of finance must master not only advanced concepts and mathematical models but also learn how to implement these models computationally. This comprehensive text, first published in 2002, combines the theory and mathematics behind financial engineering with an emphasis on computation, in keeping with the way financial engineering is practised in capital markets. Unlike most books on investments, financial engineering, or derivative securities, the book starts from very basic ideas in finance and gradually builds up the theory. It offers a thorough grounding in the subject for MBAs in finance, students of engineering and sciences who are pursuing a career in finance, researchers in computational finance, system analysts, and financial engineers. Along with the theory, the author presents numerous algorithms for pricing, risk management, and portfolio management. The emphasis is on pricing financial and derivative securities: bonds, options, futures, forwards, interest rate derivatives, mortgage-backed securities, bonds with embedded options, and more.
