

1. Record Nr.	UNINA9910554808603321
Autore	Boudreault Mathieu
Titolo	Actuarial finance : derivatives, quantitative models and risk management // Mathieu Boudreault and Jean-Francois Renaud
Pubbl/distr/stampa	Hoboken, NJ : , : John Wiley, , 2019
ISBN	1-119-13702-0 1-119-52643-4 1-119-13701-2
Edizione	[1st edition]
Descrizione fisica	1 online resource (591 pages)
Disciplina	658.155
Soggetti	Financial risk management Finance - Mathematical models Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Actuaries and their environment -- Financial markets and their securities -- Forwards and futures -- Swaps -- Options -- Engineering advanced derivatives -- Equity-linked insurance and annuities -- One-period binomial tree model -- Two-period binomial tree model -- Multi-period binomial tree model -- Further topics in the binomial tree model -- Market incompleteness and one-period trinomial tree models -- Brownian motion -- Introduction to stochastic calculus -- Introduction to the Black-Scholes-Merton model -- Rigorous derivations of the Black-Scholes formula -- Applications and extensions of the Black-Scholes formula -- Simulation methods -- Hedging strategies in practice.
Sommario/riassunto	A new textbook offering a comprehensive introduction to models and techniques for the emerging field of actuarial Finance Drs. Boudreault and Renaud answer the need for a clear, application-oriented guide to the growing field of actuarial finance with this volume, which focuses on the mathematical models and techniques used in actuarial finance for the pricing and hedging of actuarial liabilities exposed to financial markets and other contingencies. With roots in modern financial mathematics, actuarial finance presents unique challenges due to the

long-term nature of insurance liabilities, the presence of mortality or other contingencies and the structure and regulations of the insurance and pension markets. Motivated, designed and written for and by actuaries, this book puts actuarial applications at the forefront in addition to balancing mathematics and finance at an adequate level to actuarial undergraduates. While the classical theory of financial mathematics is discussed, the authors provide a thorough grounding in such crucial topics as recognizing embedded options in actuarial liabilities, adequately quantifying and pricing liabilities, and using derivatives and other assets to manage actuarial and financial risks. Actuarial applications are emphasized and illustrated with about 300 examples and 200 exercises. The book also comprises end-of-chapter point-form summaries to help the reader review the most important concepts. Additional topics and features include: Compares pricing in insurance and financial markets Discusses event-triggered derivatives such as weather, catastrophe and longevity derivatives and how they can be used for risk management; Introduces equity-linked insurance and annuities (EIAs, VAs), relates them to common derivatives and how to manage mortality for these products Introduces pricing and replication in incomplete markets and analyze the impact of market incompleteness on insurance and risk management; Presents immunization techniques alongside Greeks-based hedging; Covers in detail how to delta-gamma/rho/vega hedge a liability and how to rebalance periodically a hedging portfolio. This text will prove itself a firm foundation for undergraduate courses in financial mathematics or economics, actuarial mathematics or derivative markets. It is also highly applicable to current and future actuaries preparing for the exams or actuary professionals looking for a valuable addition to their reference shelf. As of 2019, ...
