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Autore	Rossello Damiano
Titolo	A Cookbook with Probability One : With Financial Applications // by Damiano Rossello
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Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (401 pages)
Collana	La Matematica per il 3+2, , 2038-5757 ; ; 161
Disciplina	519.2
Soggetti	Probabilities Statistics Probability Theory Statistical Theory and Methods Probabilitats Estadística econòmica Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	1 Probability, Events and Random Variables -- 2 Distribution of Random Variables -- 3 Multidimensional Random Variables -- 4 Moments and the Alike -- 5 Special Distributions -- 6 Conditioning -- 7 Regression, Prediction and more Dependence -- 8 Convergence Concepts -- 9 Introduction to Stochastic Processes -- 10 Introduction to Market Risk Measures.
Sommario/riassunto	This book offers accessible probabilistic modelling of relevant financial problems. It is divided into two parts. The first part (cookbook) is written by emphasizing the key definitions and theorems without wasting too much of the reader with unnecessary technical details. Here, the first kind of target audience is graduate students in Economics with no prior exposition to probability theory (except for undergraduate courses in Applied Statistics) which are provided by a self-contained account of probabilistic modelling mainly applied to finance. The fundamental concepts of random variable/vector and probability distributions are introduced beforehand with respect to the

usual treatment of this subject in standard probability textbook, trying to strike a balance between precise mathematical definitions and their applied knowledge. All the analytic tools developed are illustrated through examples of probability distributions of future stock prices, returns and profit and loss, together with their main characteristics, such as moments, moment generating and characteristic functions, location-scale families, and quantiles. The extension to the multivariate case for fixed time horizons is presented, together with the fundamentals of stochastic processes both in discrete and continuous time as candidate models for asset prices and return dynamics. Convergence concepts are presented as applied to the problem of point estimation of means, variances, correlation coefficients and risk measures. Short sections on risk and copula functions, further illustrate the potential application of probability models to financial problems. The second part of the book can be accessed by those students with more mathematical preparation. All the relevant proofs of results which are only stated in the first part and some advanced exercises with complete solutions are presented. .
