

1. Record Nr.	UNINA9910819461103321
Autore	Shafer Glenn <1946->
Titolo	Game-theoretic foundations for probability and finance / / Glenn Ray Shafer, Rutgers University, New Jersey, USA, Vladimir Vovk, University of London, Surrey, UK
Pubbl/distr/stampa	Hoboken, NJ : , : Wiley, , 2019
ISBN	1-118-54802-7 1-118-54793-4 1-118-54803-5
Edizione	[1st edition]
Descrizione fisica	1 online resource (483 pages)
Collana	Wiley series in probability and statistics
Disciplina	332.01/5193
Soggetti	Finance - Statistical methods Finance - Mathematical models Game theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Earlier edition published in 2001 as: Probability and finance : it's only a game!
Nota di bibliografia	Includes bibliographical references and index.
Sommario/riassunto	Game-theoretic probability and finance come of age Glenn Shafer and Vladimir Vovk's Probability and Finance , published in 2001, showed that perfect-information games can be used to define mathematical probability. Based on fifteen years of further research, Game-Theoretic Foundations for Probability and Finance presents a mature view of the foundational role game theory can play. Its account of probability theory opens the way to new methods of prediction and testing and makes many statistical methods more transparent and widely usable. Its contributions to finance theory include purely game-theoretic accounts of Ito's stochastic calculus, the capital asset pricing model, the equity premium, and portfolio theory. Game-Theoretic Foundations for Probability and Finance is a book of research. It is also a teaching resource. Each chapter is supplemented with carefully designed exercises and notes relating the new theory to its historical context. Praise from early readers "Ever since Kolmogorov's Grundbegriffe , the standard mathematical treatment of probability theory has been

measure-theoretic. In this ground-breaking work, Shafer and Vovk give a game-theoretic foundation instead. While being just as rigorous, the game-theoretic approach allows for vast and useful generalizations of classical measure-theoretic results, while also giving rise to new, radical ideas for prediction, statistics and mathematical finance without stochastic assumptions. The authors set out their theory in great detail, resulting in what is definitely one of the most important books on the foundations of probability to have appeared in the last few decades.” – Peter Grünwald, CWI and University of Leiden “Shafer and Vovk have thoroughly re-written their 2001 book on the game-theoretic foundations for probability and for finance. They have included an account of the tremendous growth that has occurred since, in the game-theoretic and pathwise approaches to stochastic analysis and in their applications to continuous-time finance. This new book will undoubtedly spur a better understanding of the foundations of these very important fields, and we should all be grateful to its authors.” – Ioannis Karatzas, Columbia University

---