

|                         |  |
|-------------------------|--|
| 1. Record Nr.           | UNINA9910166634503321  |
| Titolo                  | Extreme events in finance : a handbook of extreme value theory and its applications // edited by Francois Longin   |
| Pubbl/distr/stampa      | Hoboken, New Jersey : , : Wiley, , 2017<br>©2017   |
| ISBN                    | 1-118-65020-4<br>1-118-65033-6<br>1-118-65031-X  |
| Descrizione fisica      | 1 online resource (638 p.)   |
| Collana                 | Wiley Handbooks in Financial Engineering and Econometrics<br>THEi Wiley ebooks   |
| Classificazione         | BUS033070  |
| Disciplina              | 332.015195   |
| Soggetti                | Finance - Mathematical models<br>Extreme value theory - Mathematical models  |
| Lingua di pubblicazione | Inglese  |
| Formato                 | Materiale a stampa   |
| Livello bibliografico   | Monografia   |
| Note generali           | Description based upon print version of record.  |
| Nota di bibliografia    | Includes bibliographical references at the end of each chapters and indexes.   |
| Nota di contenuto       | Cover; Title Page; Copyright; Contents; About the Editor; About the Contributors; Chapter 1 Introduction; 1.1 Extremes; 1.2 History; 1.3 Extreme value theory; 1.4 Statistical estimation of extremes; 1.5 Applications in finance; 1.6 Practitioners' points of view; 1.7 A broader view on modeling extremes; 1.8 Final words; 1.9 Thank you note; References; Chapter 2 Extremes Under Dependence-Historical Development and Parallels with Central Limit Theory; 2.1 Introduction; 2.2 Classical (I.I.D.) central limit and extreme value theories; 2.3 Exceedances of levels, kth largest values<br>2.4 CLT and EVT for stationary sequences, bernstein's blocks and strong mixing<br>2.5 Weak distributional mixing for EVT, D(un), extremal index; 2.6 Point process of level exceedances; 2.7 Continuous parameter extremes; References; Chapter 3 The Extreme Value Problem in Finance: Comparing the Pragmatic Program with the Mandelbrot Program; 3.1 The extreme value puzzle in financial modeling; 3.2 The sato classification and the two programs; 3.3 Mandelbrot's program: A fractal approach; 3.4 The Pragmatic Program: A data-driven approach; |

### 3.5 Conclusion; Acknowledgments; References

#### Chapter 4 Extreme Value Theory: An Introductory Overview4.1

Introduction; 4.2 Univariate case; 4.3 Multivariate case: Some highlights; Further reading; Acknowledgments; References; Chapter 5 Estimation of the Extreme Value Index; 5.1 Introduction; 5.2 The main limit theorem behind extreme value theory; 5.3 Characterizations of the max-domains of attraction and extreme value index estimators; 5.4 Consistency and asymptotic normality of the estimators; 5.5 Second-order reduced-bias estimation; 5.6 Case study; 5.7 Other topics and comments; References

Chapter 6 Bootstrap Methods in Statistics of Extremes6.1 Introduction; 6.2 A few details on EVT; 6.3 The bootstrap methodology in statistics of univariate extremes; 6.4 Applications to simulated data; 6.5

Concluding remarks; Acknowledgments; References; Chapter 7 Extreme Values Statistics for Markov Chains with Applications to Finance and Insurance; 7.1 Introduction; 7.2 On the (pseudo) regenerative approach for markovian data; 7.3 Preliminary results; 7.4 Regeneration-based statistical methods for extremal events; 7.5 The extremal index; 7.6 The regeneration-based hill estimator

7.7 Applications to ruin theory and financial time series7.8 An application to the CAC40; 7.9 Conclusion; References; Chapter 8 Levy Processes and Extreme Value Theory; 8.1 Introduction; 8.2 Extreme value theory; 8.3 Infinite divisibility and Levy processes; 8.4 Heavy-tailed Levy processes; 8.5 Semi-heavy-tailed Levy processes; 8.6 Levy processes and extreme values; 8.7 Conclusion; References; Chapter 9 Statistics of Extremes: Challenges and Opportunities; 9.1 Introduction; 9.2 Statistics of bivariate extremes; 9.3 Models based on families of tilted measures; 9.4 Miscellanea; References

Chapter 10 Measures of Financial Risk

---

#### Sommario/riassunto

"A guide to the growing importance of extreme value risk theory, methods, and applications in the financial sector Presenting a uniquely accessible guide, Extreme Events in Finance: A Handbook of Extreme Value Theory and its Applications features a combination of the theory, methods, and applications of extreme value theory (EVT) in finance as well as a practical understanding of market behavior including both ordinary and extraordinary conditions.&nbsp; Beginning with a fascinating history of EVTs and financials modeling, the handbook introduces the historical implications that resulted in the applications and then clearly examines the fundamental results of EVT in finance. After dealing with these theoretical results, the handbook focuses on the EVT methods critical for data analysis. Finally, the handbook features the practical applications and techniques, and how these can be implemented in financial markets. Extreme Events in Finance: A Handbook of Extreme Value Theory and its Applications also includes: Over 40 contributions from international experts in the areas of finance, statistics, economics, business, insurance, and risk management Topical discussions on univariate and multivariate case extremes as well as regulation in financial markets&nbsp; Extensive references in order to provide readers with resources for further study Discussions on using R packages to compute the value of risk and related quantities&nbsp; The book is a valuable reference for practitioners in financial markets such as financial institutions, investment funds, and corporate treasuries, financial engineers, quantitative analysts, regulators, risk managers, large-scale consultancy groups, and insurers. Extreme Events in Finance: A Handbook of Extreme Value Theory and its Applications is also a useful textbook for postgraduate courses on the methodology of EVTs in finance"--

"Extreme Events in Finance: A Handbook of Extreme Value Theory and its Applications features a combination of the theory, methods, and applications of extreme value theory (EVT) in finance as well as a practical understanding of market behavior including both ordinary and extraordinary conditions"-- Provided by publisher.

---