1. Record Nr. UNINA9910131284903321

Autore	Peters Gareth W. <1978->
Titolo	Advances in heavy tailed risk modeling : a handbook of operational risk / / Gareth W. Peters, Pavel V. Shevchenko
Pubbl/distr/stampa	Hoboken, New Jersey : , : Wiley, , 2015 ©2015
ISBN	1-118-90954-2 1-118-90956-9
Edizione	[1st edition]
Descrizione fisica	1 online resource (662 p.)
Collana	Wiley Handbooks in Financial Engineering and Econometrics
Classificazione	MAT029000TEC009060BUS004000
Disciplina	658.15/5
Soggetti	Risk management Operational risk
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 and index.
Nota di contenuto	Cover; Title Page; Copyright; Dedication; Contents in Brief; Contents; Preface; Acronyms; Symbols; List of Distributions; Chapter 1 Motivation for Heavy-Tailed Models; 1.1 Structure of the Book; 1.2 Dominance of the Heaviest Tail Risks; 1.3 Empirical Analysis Justifying Heavy-Tailed Loss Models-in OpRisk; 1.4 Motivating Parametric, Spliced and Non-Parametric Severity Models; 1.5 Creating Flexible Heavy-Tailed Models via Splicing; Chapter 2 Fundamentals of Extreme Value Theory for OpRisk; 2.1 Introduction; 2.2 Historical Perspective on EVT and Risk 2.3 Theoretical Properties of Univariate EVT-Block Maxima and the GEV Family2.4 Generalized Extreme Value Loss Distributional Approach (GEV-LDA); 2.4.1 Statistical Considerations for Applicability of the GEV Model; 2.4.2 Various Statistical Estimation Procedures for the GEV Model Parameters in OpRisk Settings; 2.4.3 GEV Sub-Family Approaches in OpRisk LDA Modeling; 2.4.4 Properties of the Frechet-Pareto Family of Severity Models; 2.4.5 Single Risk LDA Poisson-Generalized Pareto Family; 2.4.6 Single Risk LDA Poisson-Burr Family; 2.4.7 Properties of the Gumbel family of Severity Models 2.4.8 Single Risk LDA Poisson-LogNormal Family2.4.9 Single Risk LDA Poisson-Benktander II Models; 2.5 Theoretical Properties of Univariate EVT-Threshold Exceedances; 2.5.1 Understanding the Distribution of Threshold Exceedances; 2.6 Estimation Under the Peaks Over Threshold

Approach via the Generalized Pareto Distribution; 2.6.1 Maximum-Likelihood Estimation Under the GPD Model; 2.6.2 Comments on Probability-Weighted Method of Moments Estimation Under the GPD Model; 2.6.3 Robust Estimators of the GPD Model Parameters; 2.6.4 EVT-Random Number of Losses
Chapter 3 Heavy-Tailed Model Class Characterizations for LDA3.1 Landau Notations for OpRisk Asymptotics: Big and Little `Oh'; 3.2 Introduction to the Sub-Exponential Family of Heavy-Tailed Models; 3.3 Introduction to the Regular and Slow Variation Families-of Heavy-Tailed Models; 3.4 Alternative Classifications of Heavy-Tailed Models and Tail Variation; 3.5 Extended Regular Variation and Matuszewska Indices for Heavy-Tailed Models; Chapter 4 Flexible Heavy-Tailed Severity Models: -Stable Family; 4.1 Infinitely Divisible and Self-Decomposable Loss Random Variables
4.1.1 Basic Properties of Characteristic Functions4.1.2 Divisibility and Self-Decomposability of Loss Random Variables; 4.2 Characterizing Heavy-Tailed -Stable Severity Models; 4.2.1 Characterisations of -Stable Severity Models via the Domain of Attraction; 4.3 Deriving the Properties and Characterizations of the -Stable Severity Models; 4.3.1 Unimodality of -Stable Severity Models; 4.3.2 Relationship between L Class and -Stable Distributions; 4.3.3 Fundamentals of Obtaining the -Stable Characteristic Function
4.3.4 From Levy-Khinchin's Canonical Representation to the -Stable Characteristic Function Parameterizations

Sommario/riassunto

A cutting-edge guide for the theories, applications, and statistical methodologies essential to heavy tailed risk modeling Focusing on the quantitative aspects of heavy tailed loss processes in operational risk and relevant insurance analytics, Advances in Heavy Tailed Risk Modeling: A Handbook of Operational Risk presents comprehensive coverage of the latest research on the theories and applications in risk measurement and modeling techniques. Featuring a unique balance of mathematical and statistical perspectives, the handbook begins by introducing the motivation for heavy tailed risk pro