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Nota di contenuto	Operational Risk; Contents; Preface; Acknowledgments; Part I Introduction to operational risk modeling; 1 Operational risk; 1.1 Introduction; 1.1.1 Basel II - General; 1.1.2 Basel II - Operational risk; 1.2 Operational risk in insurance; 1.3 The analysis of operational risk; 1.4 The model- based approach; 1.4.1 The modeling process; 1.5 Organization of this book; 2 Basic probability concepts; 2.1 Introduction; 2.2 Distribution functions and related concepts; 2.3 Moments; 2.4 Quantiles of a distribution; 2.5 Generating functions; 2.6 Exercises; 3 Measures of risk; 3.1 Introduction 3.2 Risk measures3.3 Tail- Value-at- Risk; Part II Probabilistic tools for operational risk modeling; 4 Models for the size of losses: Continuous distributions; 4.1 Introduction; 4.2 An inventory of continuous distributions; 4.2.1 One-parameter distributions; 4.2.2 Two-parameter distributions; 4.2.3 Three-parameter distributions; 4.2.4 Four-parameter distributions; 4.2.5 Distributions with finite support; 4.3 Selected distributions and their relationships; 4.3.1 Introduction; 4.3.2 Two important parametric families; 4.4 Limiting distributions; 4.5 The role of parameters 4.5.1 Parametric and scale distributions4.5.2 Finite mixture distributions; 4.5.3 Data-dependent distributions; 4.6 Tails of distributions; 4.6.1 Classification based on moments; 4.6.2

Classification based on tail behavior; 4.6.3 Classification based on hazard rate function; 4.7 Creating new distributions; 4.7.1 Introduction; 4.7.2 Multiplication by a constant; 4.7.3 Transformation by raising to a power; 4.7.4 Transformation by exponentiation; 4.7.5 Continuous mixture of distributions; 4.7.6 Frailty models; 4.7.7 Splicing pieces of distributions; 4.8 TVaR for continuous distributions 4.8.1 Continuous elliptical distributions 4.8.2 Continuous exponential dispersion distributions; 4.9 Exercises; 5 Models for the number of losses: Counting distributions; 5.1 Introduction; 5.2 The Poisson distribution; 5.3 The negative binomial distribution; 5.4 The binomial distribution; 5.5 The $(a, b, 0)$ class; 5.6 The $(a, b, 1)$ class; 5.7 Compound frequency models; 5.8 Recursive calculation of compound probabilities; 5.9 An inventory of discrete distributions; 5.9.1 The $(a, b, 0)$ class; 5.9.2 The $(a, b, 1)$ class; 5.9.3 The zero-truncated subclass; 5.9.4 The zero-modified subclass 5.9.5 The compound class 5.10 A hierarchy of discrete distributions; 5.11 Further properties of the compound Poisson class; 5.12 Mixed frequency models; 5.13 Poisson mixtures; 5.14 Effect of exposure on loss counts; 5.15 TVaR for discrete distributions; 5.15.1 TVaR for discrete exponential dispersion distributions; 5.16 Exercises; 6 Aggregate loss models; 6.1 Introduction; 6.2 Model choices; 6.3 The compound model for aggregate losses; 6.4 Some analytic results; 6.5 Evaluation of the aggregate loss distribution; 6.6 The recursive method; 6.6.1 Compound frequency models 6.6.2 Underflow/overflow problems

Sommario/riassunto

Discover how to optimize business strategies from both qualitative and quantitative points of view Operational Risk: Modeling Analytics is organized around the principle that the analysis of operational risk consists, in part, of the collection of data and the building of mathematical models to describe risk. This book is designed to provide risk analysts with a framework of the mathematical models and methods used in the measurement and modeling of operational risk in both the banking and insurance sectors. Beginning with a foundation for operational risk modeling and a focus on
