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Nota di contenuto	Mathematical Finance: Deterministic and Stochastic Models; Table of Contents; Preface; Part I. Deterministic Models; Chapter 1. Introductory Elements to Financial Mathematics; 1.1. The object of traditional financial mathematics; 1.2. Financial supplies. Preference and indifference relations; 1.2.1. The subjective aspect of preferences; 1.2.2. Objective aspects of financial laws. The equivalence principle; 1.3. The dimensional viewpoint of financial quantities; Chapter 2. Theory of Financial Laws; 2.1. Indifference relations and exchange laws for simple financial operations 2.2. Two variable laws and exchange factors 2.3. Derived quantities in the accumulation and discount laws; 2.3.1. Accumulation; 2.3.2. Discounting; 2.4. Decomposable financial lawas; 2.4.1. Weak and

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2.6. Uniform decomposable financial laws: exponential regime

Chapter 3. Uniform Regimes in Financial Practice; 3.1. Preliminary comments; 3.1.1. Equivalent rates and intensities; 3.2. The regime of simple delayed interest (SDI); 3.3. The regime of rational discount (RD); 3.4. The regime of simple discount (SD); 3.5. The regime of simple advance interest (SAI); 3.6. Comments on the SDI, RD, SD and SAI uniform regimes; 3.6.1. Exchange factors (EF); 3.6.2. Corrective operations; 3.6.3. Initial averaged intensities and instantaneous intensity 3.6.4. Average length in the linear law and their conjugates 3.6.5. Average rates in linear law and their conjugated laws; 3.7. The compound interest regime; 3.7.1. Conversion of interests; 3.7.2. The regime of discretely compound interest (DCI); 3.7.3. The regime of continuously compound interest (CCI); 3.8. The regime of continuously comound discount (CCD); 3.9. Complements and exercises on compound regimes; 3.10. Comparison of laws of different regimes;

Chapter 4. Financial Operations and their Evaluation: Decisional Criteria; 4.1. Calculation of capital values: fairness 4.2. Retrospective and prospective reserve 4.3. Usufruct and bare ownership in "discrete" and "continuous" cases; 4.4. Methods and models for financial decisions and choices; 4.4.1. Internal rate as return index; 4.4.2. Outline on GDCF and "internal financial law"; 4.4.3. Classifications and propert of financial projects; 4.4.4. Decisional criteria for financial projects; 4.4.5. Choice criteria for mutually exclusive financial projects; 4.4.6. Mixed projects: the TRM method; 4.4.7. Dicisional criteria on mixed projects; 4.5. Appendix: outline on numerical methods for the solution of equations 4.5.1. General aspects

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## Sommario/riassunto

This book provides a detailed study of Financial Mathematics. In addition to the extraordinary depth the book provides, it offers a study of the axiomatic approach that is ideally suited for analyzing financial problems. This book is addressed to MBA's, Financial Engineers, Applied Mathematicians, Banks, Insurance Companies, and Students of Business School, of Economics, of Applied Mathematics, of Financial Engineering, Banks, and more.

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