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Nota di contenuto	Cover; Copyright; Credits; About the Author; Acknowledgments; About the Reviewer; www.PacktPub.com; Table of Contents; Preface; Chapter 1: What is Quantitative Finance?; Discipline 1 - finance (financial derivatives); Discipline 2 - mathematics; Discipline 3 - informatics (C++ programming); The Bento Box template; Summary; Chapter 2: Mathematical Models; Equity; Foreign exchange; Interest rates; Short rate models; Market models; Credit; Structural models; Intensity models; Summary; Chapter 3: Numerical Methods; The Monte Carlo simulation method; Algorithm of MC method; Example of MC method Binomial Trees methodAlgorithm of the BT method; Example of the BT method; The Finite Difference method; Algorithm of FDM; Example of FD method; Summary; Chapter 4: Equity Derivatives in C++; Basic example - European Call; Advanced example - equity basket; Summary; Chapter 5: Foreign Exchange Derivatives with C++; Basic example - European FX Call (FX1); Advanced example - FX barrier option (FX2); Summary; Chapter 6: Interest Rate Derivatives with C++; Basic example - plain vanilla IRS (IR1); Advanced example - IRS with Cap (IR2); Summary; Chapter 7: Credit Derivatives with C++ Basic example - bankruptcy (CR1)Advanced example - CDS (CR2); Summary; Appendix A: C++ Numerical Libraries for Option Pricing;

Numerical recipes; Financial numerical recipes; The QuantLib project; The Boost library; The GSL library; Appendix B: References; Index

Sommario/riassunto

The book takes the reader through a fast but structured crash-course in quantitative finance, from theory to practice. If you are a quantitative analyst, risk manager, actuary, or a professional working in the field of quantitative finance and want a quick hands-on introduction to the pricing of financial derivatives, this book is ideal for you. You should be familiar with the basic programming concepts and C++ programming language. You should also be acquainted with calculus of undergraduate level.
