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Nota di contenuto	Chapter 1. Introduction -- Part 1. Economic Foundations, Markets, and Participants -- Chapter 2 Oil, Money, and Yields -- Chapter 3. Fundamentals, Storage, and The Model of the Squeeze -- Chapter 4. Financialization and the Theory of Hedging Pressure -- Part 2. Quantitative Futures Strategies -- Chapter 5. Systematic Risk Premia Strategies -- Chapter 6. Quantamentals -- Chapter 7. Macro Trading -- Part 3. Volatility Trading -- Chapter 8. Options and Volatilities -- Chapter 9. The Hidden Power of Negative Gamma -- Chapter 10. Volatility Smile Trading -- Part 4. Over-the-Counter Options -- Chapter 11. Volatility Term Structure and Exotic Options -- Chapter 12. Volatility Arbitrage and Model Calibration -- Chapter 13. Spread Options and Virtual Storage -- Chapter 14. Epilogue -- Appendices. Option Pricing, Stochastic Processes, and Differential Equations -- A.

Diffusions and Probabilities -- B. Option Pricing Under Normal and Lognormal Distributions -- C. The Perturbation Method and Quadratic Normal Model -- D Option Pricing with Time-Dependent Volatility -- E. Average-Price Options -- Glossary -- References -- Index.

Sommario/riassunto

The global oil market is no longer solely influenced by the supply and demand of physical oil barrels. In today's landscape, financial barrels traded by hedge funds using quantitative algorithms and dealers managing large portfolios of oil derivatives are equally crucial in determining the price of oil. This book offers a fascinating insight into the world of oil derivatives, exploring the quantitative models and trading strategies used by professional market participants. With a focus on oil options and volatility trading, the reader is taken on a journey through the story of this market, narrated by one of its pioneers who managed a highly successful trading business for almost a quarter of a century. Bridging the fields of energy economics and mathematical finance, this book demonstrates how the science of trading can unearth unique opportunities in the oil market. Written for aspiring quantitative traders and academic researchers alike, it offers a rare glimpse into the opaque and secretive world of oil derivatives, showcasing how it operates in practice. Praise for *Virtual Barrels*: "Sure to become a classic reference text" — Owain Johnson, Global Head of Research and Product Development, CME Group "A must read for anyone interested in a deep understanding of the behaviour of oil prices and volatility" — Dr Bassam Fattouh, Director, Oxford Institute for Energy Studies "Perfect for both seasoned professionals and students alike" — Professor Petter N. Kolm, Courant Institute of Mathematical Sciences, New York University, Quant of the Year 2021.
