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Nota di contenuto	Frontmatter -- Contents -- 1. Theoretical Background -- 2. Static Hedging of Barrier Options -- 3. An Optimization Approach to Static Super-Replication -- 4. Reformulation as a Semi-Infinite Problem -- 5. Eliminating Model Parameter Uncertainty -- 6. Modifications and Extensions -- 7. Avoiding Model Errors -- 8. Empirical Hedge Performance -- 9. Summary and Outlook -- A. General Existence Theorem -- B. Source Code -- Backmatter
Sommario/riassunto	Static hedge portfolios for barrier options are very sensitive with respect to changes of the volatility surface. To prevent potentially significant hedging losses this book develops a static super-replication strategy with market-typical robustness against volatility, skew and liquidity risk as well as model errors. Empirical results and various numerical examples confirm that the static superhedge successfully eliminates the risk of a changing volatility surface. Combined with associated sub-replication strategies this leads to robust price bounds for barrier options which are also relevant in the context of dynamic hedging. The mathematical techniques used to prove appropriate existence, duality and convergence results range from financial

mathematics, stochastic and semi-infinite optimization, convex analysis and partial differential equations to semidefinite programming.