Simulation and Optimization in Finance. Modeling with MATLAB, @Risk, or VBA. Frank J. Fabozzi Series

Description:
An introduction to the theory and practice of financial simulation and optimization

In recent years, there has been a notable increase in the use of simulation and optimization methods in the financial industry. Applications include portfolio allocation, risk management, pricing, and capital budgeting under uncertainty.

This accessible guide provides an introduction to the simulation and optimization techniques most widely used in finance, while at the same time offering background on the financial concepts in these applications. In addition, it clarifies difficult concepts in traditional models of uncertainty in finance, and teaches you how to build models with software. It does this by reviewing current simulation and optimization methodology—along with available software—and proceeds with portfolio risk management, modeling of random processes, pricing of financial derivatives, and real options applications.

- Contains a unique combination of finance theory and rigorous mathematical modeling emphasizing a hands-on approach through implementation with software
- Highlights not only classical applications, but also more recent developments, such as pricing of mortgage-backed securities
- Includes models and code in both spreadsheet-based software (@RISK, Solver, Evolver, VBA) and mathematical modeling software (MATLAB)

Filled with in-depth insights and practical advice, Simulation and Optimization Modeling in Finance offers essential guidance on some of the most important topics in financial management.

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