Handbook of Modeling High-Frequency Data in Finance
Frederi G. Viens, Maria C. Mariani, Ionut Florescu

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DESCRIPTION

CUTTING-EDGE DEVELOPMENTS IN HIGH-FREQUENCY FINANCIAL ECONOMETRICS

In recent years, the availability of high-frequency data and advances in computing have allowed financial practitioners to design systems that can handle and analyze this information. *Handbook of Modeling High-Frequency Data in Finance* addresses the many theoretical and practical questions raised by the nature and intrinsic properties of this data.

A one-stop compilation of empirical and analytical research, this handbook explores data sampled with high-frequency finance in financial engineering, statistics, and the modern financial business arena. Every chapter uses real-world examples to present new, original, and relevant topics that relate to newly evolving discoveries in high-frequency finance, such as:

- Designing new methodology to discover elasticity and plasticity of price evolution
- Constructing microstructure simulation models
- Calculation of option prices in the presence of jumps and transaction costs
Using boosting for financial analysis and trading

The handbook motivates practitioners to apply high-frequency finance to real-world situations by including exclusive topics such as risk measurement and management, UHF data, microstructure, dynamic multi-period optimization, mortgage data models, hybrid Monte Carlo, retirement, trading systems and forecasting, pricing, and boosting. The diverse topics and viewpoints presented in each chapter ensure that readers are supplied with a wide treatment of practical methods.

*Handbook of Modeling High-Frequency Data in Finance* is an essential reference for academics and practitioners in finance, business, and econometrics who work with high-frequency data in their everyday work. It also serves as a supplement for risk management and high-frequency finance courses at the upper-undergraduate and graduate levels.

ABOUT THE AUTHOR

**Frederi G. Viens**, PhD, is Director and Coordinator of the Computational Finance Program at Purdue University, where he also serves as Professor of Statistics and Mathematics. He has published extensively in the areas of mathematical finance, probability theory, and stochastic processes. Dr. Viens is co-organizer of the annual Conference on Modeling High-Frequency Data in Finance.

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