Handbook of Volatility Models and Their Applications
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DESCRIPTION

A complete guide to the theory and practice of volatility models in financial engineering

Volatility has become a hot topic in this era of instant communications, spawning a great deal of research in empirical finance and time series econometrics. Providing an overview of the most recent advances, *Handbook of Volatility Models and Their Applications* explores key concepts and topics essential for modeling the volatility of financial time series, both univariate and multivariate, parametric and non-parametric, high-frequency and low-frequency.

Featuring contributions from international experts in the field, the book features numerous examples and applications from real-world projects and cutting-edge research, showing step by step how to use various methods accurately and efficiently when assessing volatility rates. Following a comprehensive introduction to the topic, readers are provided with three distinct sections that unify the statistical and practical aspects of volatility:

* Autoregressive Conditional Heteroskedasticity and Stochastic Volatility presents ARCH and stochastic volatility models, with a focus on recent research topics including mean, volatility, and skewness spillovers in equity markets
Other Models and Methods presents alternative approaches, such as multiplicative error models, nonparametric and semi-parametric models, and copula-based models of (co)volatilities.

Realized Volatility explores issues of the measurement of volatility by realized variances and covariances, guiding readers on how to successfully model and forecast these measures.

*Handbook of Volatility Models and Their Applications* is an essential reference for academics and practitioners in finance, business, and econometrics who work with volatility models in their everyday work. The book also serves as a supplement for courses on risk management and volatility at the upper-undergraduate and graduate levels.

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### ABOUT THE AUTHOR

Luc Bauwens, PhD, is Professor of Economics at the Université catholique de Louvain (Belgium), where he is also President of the Center for Operations Research and Econometrics (CORE). He has written more than 100 published papers on the topics of econometrics, statistics, and microeconomics.

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