Dynamic Copula Methods in Finance (The Wiley Finance Series)

Umberto Cherubini, Sabrina Mulinacci, Fabio Gobbi, Silvia Romagnoli
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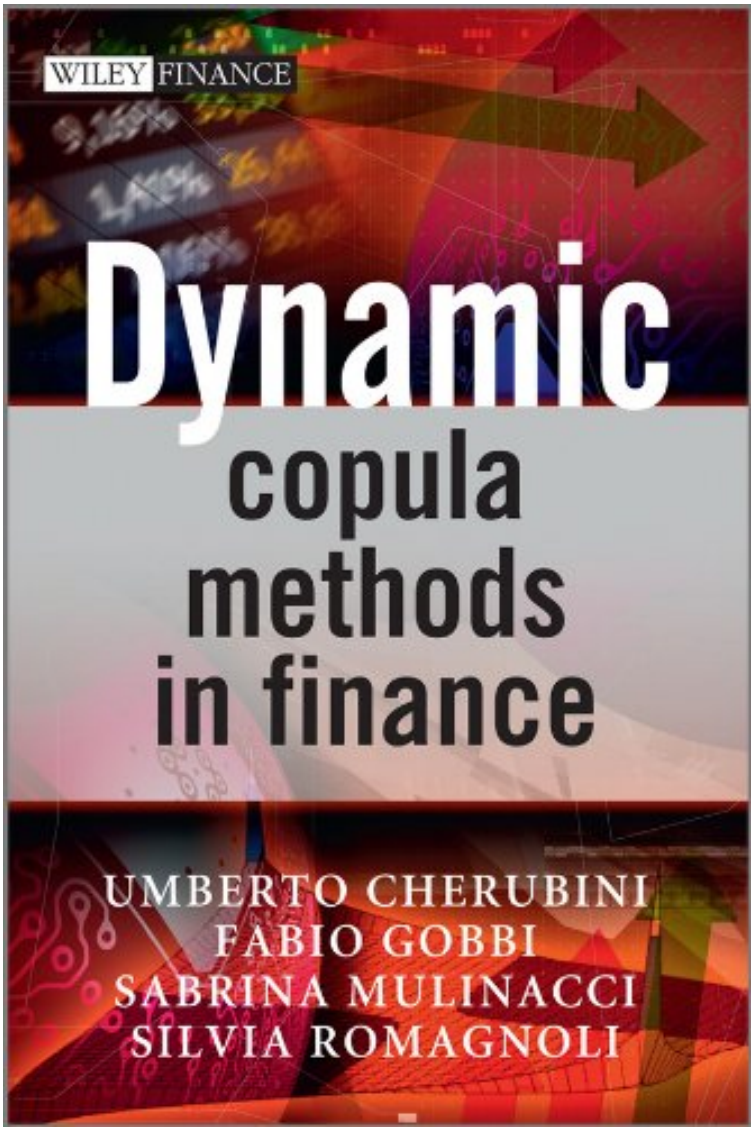

#1381809 in eBooks 2011-10-20 2011-10-20File Name: B005YO6Q6O | File size: 56.Mb

Umberto Cherubini, Sabrina Mulinacci, Fabio Gobbi, Silvia Romagnoli : Dynamic Copula Methods in Finance (The Wiley Finance Series) before purchasing it in order to gage whether or not it would be worth my time, and all praised Dynamic Copula Methods in Finance (The Wiley Finance Series):

The latest tools and techniques for pricing and risk managementThis book introduces readers to the use of copula functions to represent the dynamics of financial assets and risk factors, integrated temporal and cross-section applications. The first part of the book will briefly introduce the standard the theory of copula functions, before

examining the link between copulas and Markov processes. It will then introduce new techniques to design Markov processes that are suited to represent the dynamics of market risk factors and their co-movement, providing techniques to both estimate and simulate such dynamics. The second part of the book will show readers how to apply these methods to the evaluation of pricing of multivariate derivative contracts in the equity and credit markets. It will then move on to explore the applications of joint temporal and cross-section aggregation to the problem of risk integration.

From the Inside FlapDynamic Copula Methods in Financeldquo;Copulas address a central problem in financial modeling, namely how to describe the statistics of events which are related to two or more other events of interest. This important book provides a comprehensive and timely review of the theory and applications of copulas.rdquo;mdash;Robert Elliott, Haskayne School of Business, University of Calgaryldquo;Researchers and practitioners in the field of finance will welcome the appearance of Dynamic Copula Methods in Finance. In this innovative and well-written book, the authors make a strong case for the application of convolution-based copulas in finance. The book features numerous illustrations and a wealth of examples, most of which concern applications to financial problems. Dynamic Copula Methods in Finance promises to be a valuable addition to the rapidly expanding literature on copula models in finance.rdquo;mdash;Roger B. Nelsen, Professor Emeritus of Mathematics, Lewis Clark College, Portland, Oregonldquo;Static copula models have been extensively used in finance for more than a decade. In this book the authors show how to apply copula methods to dynamic problems, setting the ground for a number of important financial applications, from derivatives pricing to risk management.rdquo;mdash;Fabio Mercurio, Head of Quant Business Managers, Bloomberg LP, New YorkFrom the Back CoverOver the course of the past decade financial markets have witnessed a marked increase in the use of correlation dynamics models ndash; new terms such as correlation trading and correlation products have now become mainstream, and, increasingly, trading and investment activities have involved more and more exposure to credit risks that are non-Gaussian by definition. By addressing the restrictions which must be imposed on copula functions to yield dynamically consistent results this book sets out the latest research into the application of copula functions to the solution of financial problems.Beginning with a review of the issues surrounding dependence and correlation in finance and the basic concepts of copulas as they have been applied to financial problems up until now, the book goes on to introduce the theory of convolution-based copulas, and the concept of C-convolution within the mainstream of the Darsow, Nguyen and Olsen (DNO) application of copulas to Markov processes. The authors explain how the c-convolution approach can be exploited to address both spatial and temporal dependence ndash; a twofold perspective which is entirely new to these applications ndash; and demonstrate how it can be applied to the problems of evaluating multivariate equity derivatives, analyzing the credit risk exposure of a portfolio, and aggregating Value-at-Risk measures across risk-factors and business units.It shows the reader how to build original and consistent copula-based solutions to problems such as:The evaluation of multivariate and path dependent equity linked derivatives consistently with the no-arbitrage requirement imposed by financial theory and the ldquo;fair valuerdquo; principleThe evaluation of multivariate credit derivatives with a focus on the price consistency of contracts of different maturitiesA consistent strategy for aggregation and allocation of risk capital across different risk factors and business unitsA new copula-based approach to the performance analysis of mutual funds and hedge fundsThe culmination of five years original research at the University of Bologna on the use of copulas in finance, this book is essential reading for practitioners involved in pricing and risk management.About the AuthorUMBERTO CHERUBINI is Associate Professor of Financial Mathematics at the University of Bologna, where he heads the Graduate Degree in Quantitative Finance. He is a fellow of the Financial Econometrics Research Center (FERC), a member of the Scientific Committees of Abiformazione ndash; the professional education arm of the Italian banking association, and AIFIRM ndash; the Italian Association of Financial Risk Managers. He has been consulting and teaching in the field of finance and risk management for more than ten years. Before joining academia he worked as an economist at the Economic Research Department of BCI Milan. He has published papers in finance and economics in international journals, and is co-author of six books on topics of risk management and financial mathematics, including Fourier Transform Methods in Finance, John Wiley Sons, Ltd, 2009; and Copula Methods in Finance, John Wiley Sons, Ltd, 2004.FABIO GOBBI is a post-doctoral researcher at the University of Bologna. He has a PhD in Statistics from the University of Florence and his areas of research focus on probability and financial econometrics. This is his first book.SABRINA MULINACCI is Associate Professor of Mathematical Methods for Economics and Finance at the University of Bologna, Italy. Prior to this Sabrina was Associate Professor of Mathematical Methods for Economics and Actuarial Sciences at the Catholic University of Milan. She has a PhD in Mathematics from the University of Pisa and has published a number of research papers in international journals on probability and mathematical finance. She is co-author of Fourier Transform Methods in Finance, John Wiley Sons, Ltd, 2009.SILVIA ROMAGNOLI is Assistant Professor of Mathematical Models for Economics and Actuarial and Financial Sciences at the University of Bologna. Her scientific research is mainly addressed to the applications of stochastic models to finance and insurance. She has published several research papers in international journals on mathematical finance.