

Contents

The Effect of Rating Contingent Guidelines and Regulation Around Credit Rating News	1
Pilar Abad, Antonio Díaz, Ana Escribano, and M. Dolores Robles	
Practical Problems with Tests of Cointegration Rank with Strong Persistence and Heavy-Tailed Errors	7
Niklas Ahlgren and Paul Catani	
Inference in a Non-Homogeneous Vasicek Type Model.....	13
Giuseppina Albano and Virginia Giorno	
Small Sample Analysis in Diffusion Processes: A Simulation Study	19
Giuseppina Albano, Michele La Rocca, and Cira Perna	
Using Deepest Dependency Paths to Enhance Life Expectancy Estimation.....	25
Irene Albarrán-Lozano, Pablo J. Alonso-González, and Aurea Grané	
The Optimal Investment and Consumption for Financial Markets Generated by the Spread of Risky Assets for the Power Utility.....	33
Sahar Albosaily and Serguei Pergamenshchikov	
Combining Multivariate Volatility Models	39
Alessandra Amendola, Manuela Braione, Vincenzo Candila, and Giuseppe Storti	
Automatic Detection and Imputation of Outliers in Electricity Price Time Series.....	45
Ilaria Lucrezia Amerise	
Bayesian Factorization Machines for Risk Management and Robust Decision Making.....	51
Pablo Angulo, Víctor Gallego, David Gómez-Ullate, and Pablo Suárez-García	

Improving Lee-Carter Forecasting: Methodology and Some Results	57
Giovanna Apicella, Michel M. Dacorogna, Emilia Di Lorenzo, and Marilena Sibillo	
The Bank Tailored Integrated Rating	63
Daniela Arzu, Marcella Lucchetta, and Guido Massimiliano Mantovani	
A Single Factor Model for Constructing Dynamic Life Tables	69
David Atance and Eliseo Navarro	
Variable Annuities with State-Dependent Fees	75
Anna Rita Bacinello and Ivan Zoccolan	
Dynamic Policyholder Behavior and Surrender Option Evaluation for Life Insurance	81
Fabio Baione, Davide Biancalana, Paolo De Angelis, and Ivan Granito	
Classification Ratemaking via Quantile Regression and a Comparison with Generalized Linear Models	87
Fabio Baione, Davide Biancalana, Paolo De Angelis, and Ivan Granito	
An Empirical Analysis of the Lead Lag Relationship Between CDS and Stock Market	93
Laura Ballester, Rebeca Fernández, and Ana González-Urteaga	
Integration of Non-financial Criteria in Equity Investment	97
Diana Barro	
A Generalized Moving Average Convergence/Divergence for Testing Semi-strong Market Efficiency	101
Francesco Bartolucci, Alessandro Cardinali, and Fulvia Pennoni	
Periodic Autoregressive Models with Multiple Structural Changes by Genetic Algorithms	107
Francesco Battaglia, Domenico Cucina, and Manuel Rizzo	
Mortality Projection Using Bayesian Model Averaging	111
Andrés Gustavo Benchimol, Juan Miguel Marín Diazaraque, Irene Albarrán Lozano, and Pablo Jesús Alonso-González	
Robust Time-Varying Undirected Graphs	117
Mauro Bernardi and Paola Stolfi	
Two-Sided Skew and Shape Dynamic Conditional Score Models	121
Alberto Bernardi and Mauro Bernardi	
Sparse Networks Through Regularised Regressions	125
Mauro Bernardi and Michele Costola	
Approximate EM Algorithm for Sparse Estimation of Multivariate Location-Scale Mixture of Normals	129
Mauro Bernardi and Paola Stolfi	

An Extension of Multidimensional Scaling to Several Distance Matrices, and Its Application to the Italian Banking Sector	133
Alessandro Berti and Nicola Loperfido	
Disagreement in Signed Financial Networks	139
Monica Billio, Roberto Casarin, Michele Costola, and Lorenzo Frattarolo	
Bayesian Tensor Binary Regression	143
Monica Billio, Roberto Casarin, and Matteo Iacobini	
Bayesian Tensor Regression Models	149
Monica Billio, Roberto Casarin, and Matteo Iacobini	
Bayesian Nonparametric Sparse Vector Autoregressive Models	155
Monica Billio, Roberto Casarin, and Luca Rossini	
Logistic Classification for New Policyholders Taking into Account Prediction Error	161
Eva Boj and Teresa Costa	
Conditional Quantile-Located VaR	167
Giovanni Bonaccolto, Massimiliano Caporin, and Sandra Paterlini	
Probability of Default Modeling: A Machine Learning Approach	173
Stefano Bonini and Giuliana Caivano	
Risk/Return Analysis on Credit Exposure: Do Small Banks Really Apply a Pricing Risk-Based on Their Loans?	179
Stefano Bonini and Giuliana Caivano	
Life Insurers' Asset-Liability Dependency and Low-Interest Rate Environment	185
Nicola Borri, Rosaria Cerrone, Rosa Cocozza, and Domenico Curcio	
Modelling the Australian Electricity Spot Prices: A VAR-BEKK Approach	191
Manuela Braione and Davide De Gaetano	
Cyber Risk Management: A New Challenge for Actuarial Mathematics	199
Maria Francesca Carfora, Fabio Martinelli, Francesco Mercaldo, Albina Orlando, and Artiom Yautsiukhin	
Predicting the Volatility of Cryptocurrency Time-Series	203
Leopoldo Catania, Stefano Grassi, and Francesco Ravazzolo	
A Generalized Error Distribution-Based Method for Conditional Value-at-Risk Evaluation	209
Roy Cerqueti, Massimiliano Giacalone, and Demetrio Panarello	
Risk-Return Optimization for Life Insurance Portfolios	213
Riccardo Cesari and Vieri Mosco	

When Is Utilitarian Welfare Higher Under Insurance Risk Pooling?	219
Indradeb Chatterjee, Angus S. Macdonald, Pradip Tapadar, and R. Guy Thomas	
The Value of Information for Optimal Portfolio Management	225
Katia Colaneri, Stefano Herzl, and Marco Nicolosi	
Risk and Uncertainty for Flexible Retirement Schemes	231
Mariarosaria Coppola, Maria Russolillo, and Rosaria Simone	
Comparing Possibilistic Portfolios to Probabilistic Ones	237
Marco Corazza and Carla Nardelli	
Some Critical Insights on the Unbiased Efficient Frontier à la Bodnar&Bodnar	243
Marco Corazza and Claudio Pizzi	
Numerical Solution of the Regularized Portfolio Selection Problem	249
Stefania Corsaro, Valentina De Simone, Zelda Marino, and Francesca Perla	
Forecasting the Equity Risk Premium in the European Monetary Union	253
David Cortés-Sánchez and Pilar Soriano-Felipe	
Statistical Learning Algorithms to Forecast the Equity Risk Premium in the European Union	259
David Cortés-Sánchez and Pilar Soriano-Felipe	
Evaluating Variable Annuities with GMWB When Exogenous Factors Influence the Policy-Holder Withdrawals.....	267
Massimo Costabile, Ivar Massabó, and Emilio Russo	
A Continuous Time Model for Bitcoin Price Dynamics.....	273
Alessandra Cretarola, Gianna Figà-Talamanca, and Marco Patacca	
Forecasting the Volatility of Electricity Prices by Robust Estimation: An Application to the Italian Market	279
Lisa Crosato, Luigi Grossi, and Fany Nan	
“Money Purchase” Pensions: Contract Proposals and Risk Analysis.....	285
Valeria D’Amato, Emilia Di Lorenzo, Marilena Sibillo, and Roberto Tizzano	
What If Two Different Interest Rates Datasets Allow for Describing the Same Financial Product?	289
Valeria D’Amato, Antonio Díaz, Emilia Di Lorenzo, Eliseo Navarro, and Marilena Sibillo	
An Integrated Approach to Explore the Complexity of Interest Rates Network Structure	295
Maria Elena De Giuli, Marco Neffelli, and Marina Resta	

Estimating Regulatory Capital Requirements for Reverse Mortgages: An International Comparison	301
Iván de la Fuente, Eliseo Navarro, and Gregorio Serna	
A Basic Social Pension for Everyone?	305
Joseba Iñaki De La Peña and Noemí Peña-Miguel	
A Copula-Based Quantile Model	311
Giovanni De Luca, Giorgia Rivieccio, and Stefania Corsaro	
International Longevity Risk Pooling.....	317
Clemente De Rosa, Elisa Luciano, and Luca Regis	
A Two-Steps Mixed Pension System: An Aggregate Analysis.....	323
Pierre Devolder, Inmaculada Domínguez-Fabián, Francisco del Olmo-García, and José A. Herce	
The Influence of Dynamic Risk Aversion in the Optimal Portfolio Context	329
Antonio Díaz and Carlos Esparcia	
Socially Responsible Investment, Should You Bother?	335
Antonio Díaz and Gloria Garrido	
Measuring Financial Risk Co-movement in Commodity Markets	341
Gema Fernández-Avilés, Jose-María Montero, and Lidia Sanchis-Marco	
Helping Long Term Care Coverage via Differential on Mortality?	345
María Cristina Fernández-Ramos, Joseba Iñaki De La Peña, Ana Teresa Herrera, Iván Iturriastillo, and Noemí Peña-Miguel	
Tuning a Deep Learning Network for Solvency II: Preliminary Results...	351
Ugo Fiore, Zelda Marino, Luca Passalacqua, Francesca Perla, Salvatore Scognamiglio, and Paolo Zanetti	
Exploratory Projection Pursuit for Multivariate Financial Data	357
Cinzia Franceschini	
The Rearrangement Algorithm of Puccetti and Rüschendorf: Proving the Convergence	363
Marcello Galeotti, Giovanni Rabitti, and Emanuele Vannucci	
Automatic Balancing Mechanisms in Practice: What Lessons for Pension Policy Makers?	369
Frederic Gannon, Florence Legros, and Vincent Touzé	
Empirical Evidence from the Three-Way LC Model.....	375
Giuseppe Giordano, Steven Haberman, and Maria Russolillo	
Variable Selection in Estimating Bank Default	381
Francesco Giordano, Marcella Niglio, and Marialuisa Restaino	

Multiple Testing for Different Structures of Spatial Dynamic Panel Data Models.....	387
Francesco Giordano, Massimo Pacella, and Maria Lucia Parrella	
Loss Data Analysis with Maximum Entropy.....	391
Erika Gomes-Gonçalves, Henryk Gzyl, and Silvia Mayoral	
Real-World Versus Risk-Neutral Measures in the Estimation of an Interest Rate Model with Stochastic Volatility	397
Lourdes Gómez-Valle and Julia Martínez-Rodríguez	
Extensions of Fama and French Models.....	403
María de la O González and Francisco Jareño	
The Islamic Financial Industry: Performance of Islamic vs. Conventional Sector Portfolios	407
María de la O González, Francisco Jareño, and Camalea El Haddouti	
Do Google Trends Help to Forecast Sovereign Risk in Europe?.....	413
Marcos González-Fernández and Carmen González-Velasco	
The Contribution of Usage-Based Data Analytics to Benchmark Semi-autonomous Vehicle Insurance.....	419
Montserrat Guillén and Ana M. Pérez-Marín	
Some Empirical Evidence on the Need of More Advanced Approaches in Mortality Modeling	425
Asmerilda Hitaj, Lorenzo Mercuri, and Edit Rroji	
Could Machine Learning Predict the Conversion in Motor Business?	431
Lorenzo Invernizzi and Vittorio Magatti	
European Insurers: Interest Rate Risk Management	437
Francisco Jareño, Marta Tolentino, María de la O González, and María Ángeles Medina	
Estimation and Prediction for the Modulated Power Law Process.....	443
Alicja Jokiel-Rokita and Ryszard Magiera	
The Level of Mortality in Insured Populations	449
Josep Lledó, Jose M. Pavía, and Francisco G. Morillas	
Kurtosis Maximization for Outlier Detection in GARCH Models.....	455
Nicola Loperfido	
Google Searches for Portfolio Management: A Risk and Return Analysis	461
Mario Maggi and Pierpaolo Uberti	
The Challenges of Wealth and Its Intergenerational Transmission in an Aging Society.....	467
André Masson	

Bivariate Functional Archetypoid Analysis: An Application to Financial Time Series	473
Jesús Moliner and Irene Epifanio	
A Note on the Shape of the Probability Weighting Function	477
Martina Nardon and Paolo Pianca	
Disability Pensions in Spain: A Factor to Compensate Lifetime Losses ...	483
Patricia Peinado	
A Minimum Pension for Older People via Expenses Rate	489
Noemí Peña-Miguel, María Cristina Fernández-Ramos, and Joseba Iñaki De La Peña	
A Comparative Analysis of Neuro Fuzzy Inference Systems for Mortality Prediction	495
Gabriella Piscopo	
Financial Networks and Mechanisms of Business Capture in Southern Italy over the First Global Wave (1812–1913): A Network Analysis Approach	501
Maria Carmela Schisani, Maria Prosperina Vitale, and Giancarlo Ragozini	
Modeling High-Frequency Price Data with Bounded-Delay Hawkes Processes	507
Ali Caner Türkmen and Ali Taylan Cemgil	
Pricing Illiquid Assets by Entropy Maximization Through Linear Goal Programming.....	513
José Luis Vilar-Zanón and Olivia Peraita-Ezcurra	