SVETLOZAR (ZARI) TODOROV RACHEV

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Google Scholar Link

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EDUCATION

M.SC. IN MATHEMATICS
Sofia University, Bulgaria
July 1974
Thesis: "Reliability of Aging Systems"

Ph.D. IN MATHEMATICS
Lomonosov University
Moscow, USSR. Faculty of Mechanics and Mathematics,
October 12, 1979.
Dissertation: *"The structure of the metrics in the space of random variables and their distributions."*

DOCTOR OF SCIENCE (Habilitation) in Physics and Mathematics, Steklov Mathematical Institute,
Moscow, USSR. April 10, 1986.
Dissertation: "*Probability metrics and their applications to the stability problems for stochastic models*"

ABOUT

DATE OF BIRTH: September 6, 1951
CITIZENSHIP: U. S. A.
CURRENT POSITION: Professor, Department of Mathematics & Statistics, Texas Tech University

PREVIOUS APPOINTMENTS

2017 – CURRENT
Professor, Department. of Mathematics & Statistics, Texas Tech University

2012 – 2016
Professor, College of Business Program Director, Finance and Accounting
Stony Brook University
Research Professor, Department of Applied Math and Statistics

2011 – 2012
Frey Family Foundation Chair of Quantitative Finance
Department of Applied Mathematics and Statistics
Stony Brook University

1998 – 2010
Endowed Chair of Statistics
Econometrics and Mathematical Finance
School of Economics and Business Engineering
Karlsruhe Institute of Technology

1989 – 1998
Professor, Department of Statistics and Applied Probability
University of California at Santa Barbara (1994-1995, Department Chairman)

1988 – 1988
Visiting Associate Professor
Stony Brook University

1987 – 1987
John H. Van Vleck, Visiting Professor, Wesleyan University, Connecticut
and Visiting Associate Professor, Centre for Stochastic Processes
University of North Carolina at Chapel Hill

1984 – 1986
Senior Research Fellow, Bulgarian Academy of Sciences
and Visiting Senior Research Fellow
Steklov Mathematical Institute, Academy of Sciences of the USSR, Moscow

1980 – 1984
Research Fellow, Mathematical Institute, Bulgarian Academy of Sciences

1977 – 1979
Post-graduate Student, Lomonosov University, Faculty of Mechanics and Mathematics, Department of Probability, Moscow, USSR

1974 – 1977
Mathematician, Mathematical Institute, Bulgarian Academy of Sciences

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AWARDS

Fellow of the Institute of Mathematical Statistics
Elected Member of the International Statistical Institute
Foreign Member of the Russian Academy of Natural Sciences
Honorary Doctor of Science at St. Petersburg Technical University
Senior Humboldt Professor Award
Barney E. Rushing, Jr., Faculty Distinguished Rsearch Award - STEM at Texas Tech University
Excellence in Innovation Award at Texas Tech University

PUBLISHED/BROADCAST INTERVIEWS

ZARI RACHEV. FACTBOX-TOOLS TO PREDICT MARKET SHOCKS, REUTERS, MAY 24, 2009
https://www.reuters.com/article/models-math/factbox-tools-to-predict-marketshocks-idUSL169274620090525
https://www.reuters.com/article/us-models-finanalytica/assessing-the-risk-ofa-cataclysm-idUSTRE54O00R20090525

RISIKOMANAGER JOURNAL: Interview with Prof. Dr. Svetlozar Rachev, Chair of Statistics, Econometrics and Mathematical Finance at University of Karlsruhe (TH) and Prof. Stefan Mittnik (Ph.D.) Chair of Financial Econometrics at University of Munich New Approaches for Portfolio Optimization Parting with the Bell Curve
https://statistik.econ.kit.edu/download/doc_secure1/RM-Interview-RachevMittnik-EnglishTranslation.pdf

PATENTS

RACHEV ET AL. SYSTEM AND METHOD FOR THE VALUATION OF DERIVATIVES,
United States Patent, Serial No. 10/888,414, Filed July 9, 2004, Docket No. 031/0424:US.UTL, PATENT NUMBER 7,630,931, DATE OF PATENT: DECEMBER 8, 2009

RACHEV ET AL. SYSTEM AND METHOD FOR PROVIDING OPTIMIZATION OF A FINANCIAL PORTFOLIO USING A PARAMETRIC LEPTOKURTIC DISTRIBUTION, United States Patent, Serial No. 10/888,414, Filed July 9, 2004, Docket No. 031/0424.US.UTL, May, 2010

RACHEV ET AL. RISK MANAGEMENT SYSTEM AND METHOD FOR DETERMINING RISK CHARACTERISTICS EXPLAINING HEAVY TAILS OF RISK FACTORS, U.S. Patent Trademark Office, Patent No. 7,778,897, August 17, 2010

RACHEV ET AL. SYSTEM AND METHOD FOR PROVIDING REALLOCATION AND REVERSE OPTIMIZATION OF A FINANCIAL PORTFOLIO USING A PARAMETRIC LEPTOKURTIC DISTRIBUTION, United States Patent, U.S. Patent Trademark Office, Patent No. 7,890,409, February 15, 2011

RACHEV ET AL. SYSTEM AND METHOD FOR GENERATING RANDOM VECTORS FOR ESTIMATING PORTFOLIO RISK,
United States Patent, U.S. Patent Trademark Office, Patient No. 8,170,941, May 1, 2012

MENTORED PH.D. STUDENTS

1. PRACHI CHATURVEDI (UCSB, DEPARTMENTS OF STATISTICS AND APPLIED PROBABILITY)
2. BESSY ATHANASOPOULOS (UCSB, DEPARTMENTS OF STATISTICS AND APPLIED PROBABILITY)
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66. BHATHIYA DIVELGAMA (TEXAS TECH UNIVERSITY, DEPARTMENT OF MATH & STATISTICS)

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LIST OF SVETLOZAR RACHEV'S POSTDOCTORAL STUDENTS

1. Dr. Young Shin Kim (Karlsruhe Institute of Technology, School of Business and Economics)
2. Dr. Jiho Park (Texas Tech University, Department. of Mathematics & Statistics)
3. Dr. Davide Lauria (Texas Tech University, Department. of Mathematics & Statistics)

CURRENT TEACHING AT TTU

https://www.Departments.ttu.edu/math/teaching/current_schedules.php

SPRING 2026

MATH 4000-D02 ACTUARIAL MATHEMATICS FOR LIFE CONTINGENT RISKS
MATH 8000-006 DOCTOR'S DISSERTATION
MATH 6351 D01 QUANTITATIVE FINANCE
MATH 5099-D21 INDEPENDENT STUDY
MATH 7000-016 RESEARCH: ANALYTICS OF PORTFOLIOS OF EQUITY ETFS
STAT 7000-008 RESEARCH: BRIDGING TREASURY-BOND DISLOCATION
STAT 7000-009 RESEARCH: OPTION PRICING MODEL WITH DRIFTED LEVY SUBORDINATORS
STAT 7000-018 RESEARCH: TRINOMIAL TREES FOR MODERN STOCHASTIC INTEREST RATE MODELS
STAT 7000-022 RESEARCH: TECHNICAL ANALYSIS AND MARKET EFFICIENCY UNDER A RATIONAL-FINANCE LENS

PUBLICATIONS: BOOKS & MONOGRAPHS

Y He, WB Lindquist, SZ Rachev, D Lauria, Risk Management for Cryptocurrency Portfolios, Walter de Gruyter GmbH & Co KG 2025

W. Brent Lindquist, Svetlozar T. Rachev, Yuan Hu, and Abootaleb Shirvani, Advanced Tools for Risk Management, Springer series, "Dynamic Modeling and Econometrics in Economics and Finance," Springer, 2022.
https://www.springer.com/series/5859/books?page=1

Frank J. Fabozzi, Sergio M. Focardi, Svetlozar T. Rachev, and Bala Arshanapalli, Basics of Financial Econometrics: Tools, Concepts, and Asset Management Applications, Wiley, 2014.
https://onlinelibrary.wiley.com/doi/book/10.1002/9781118856406 2.

Stoyan Stoyanov, Svetlozar Rachev, and Frank Fabozzi, Optimal Portfolio Management in Highly Volatile Markets, Scholars Press, 2013
https://www.amazon.com/Optimal-Portfolio-Management-Volatile- Markets/dp/3639514130

S. T. Rachev, L. B. Klebanov, S. V. Stoyanov, and F. Fabozzi, The Methods of Distances in the Theory of Probability and Statistics, John Wiley, 2013
https://www.springer.com/gp/book/9781461448686

S. T. Rachev, Y. Kim, M. Bianchi, and F. Fabozzi, Financial Models with Levy Processes and Volatility Clustering, Springer, 2011
http://www.wiley.com/WileyCDA/WileyTitle/productCd-0470482354,descCd-tableOfContents.html

S. T. Rachev, S. V. Stoyanov, and F. Fabozzi, A Probability Metrics Approach to Financial Risk Measures, Wiley–Blackwell, 2011http://www.wiley.com/WileyCDA/WileyTitle/productCd-1405183691.html

Rachev, S. T., Hoechstoetter, M., Fabozzi, F., Focardi, S., Probability and Statistics for Finance, John Wiley, Finance, 2010
http://www.wiley.com/WileyCDA/WileyTitle/productCd-0470400935.html

L. Klebanov, S. T. Rachev, and F. Fabozzi, Robust and Non-Robust Models in Statistics, NOVA-Science Publishers, 2009
https://www.novapublishers.com/catalog/product_info.php?products_id=10251

S. Trueck and S. T. Rachev, Rating Based Modeling of Credit Risk: Theory and Application of Migration Matrices, Academic Press Advances Finance, 2008
http://www.elsevier.com/wps/find/bookdescription.cws_home/716895/description#description

SVETLOZAR (ZARI) TODOROV RACHEV

Rachev, S. T., Stoyanov, S., Fabozzi, F., Advanced Stochastic Models, Risk Assessment and Portfolio Optimization: The Ideal Risk, Uncertainty, and Performance Measures, John Wiley, Finance, 2007
http://www.wiley.com/WileyCDA/WileyTitle/productCd-047005316X.html

S. T. Rachev, J. Hsu, B. Bagasheva, and F. Fabozzi, Bayesian Methods in Finance, John Wiley, 2007
http://www.wiley.com/WileyCDA/WileyTitle/productCd-0471920835.html

S. T. Rachev, S. Mittnik, Frank J. Fabozzi, S. Focardi, and T. Jasic, Financial Econometrics: From Basics to Advanced Modeling Techniques, John Wiley, 2007
http://www.wiley.com/WileyCDA/WileyTitle/productCd-0471784508.html

A. Chernobai, S. T. Rachev, and F. Fabozzi, Operational Risk: A Guide to Basel II Capital Requirements, Models and Analysis, John Wiley, 2007
http://www.wiley.com/WileyCDA/WileyTitle/productCd-0471780510.html

L. Klebanov, T. Kozubowski, and S. T. Rachev, Ill-Posed Problems in Probability and Stability of Random Sums, NOVA Science Publishers, 2006
https://www.novapublishers.com/catalog/product_info.php?products_id=4546

S. T. Rachev, C. Menn, and F. Fabozzi, Fat-Tailed and Skewed Asset Return Distributions: Implications for Risk Management, Portfolio selection and Option Pricing, John Wiley, 2005
http://www.wiley.com/WileyCDA/WileyTitle/productCd-0471718866.html

S. T. Rachev and S. Mittnik, Stable Paretian Models in Finance, Series in Financial Economics and Quantitative Analysis, John Wiley, 2000
http://www.wiley.com/WileyCDA/WileyTitle/productCd-0471953148.html

S. T. Rachev and L. Rueschendorf, Mass Transportation Problems, Vol II: Applications, Springer, 1999
http://www.springer.com/statistics/book/978-0-387-98352-3

S. T. Rachev and L. Rueschendorf, Mass Transportation Problems, Vol I: Theory, Springer, 1998
http://www.springer.com/mathematics/probability/book/978-0-387-98350-9construction_of.html?id=2_V9AAAAIAAJ

S. T. Rachev, Probability Metrics and the Stability of Stochastic Models, Wiley, 1991
http://www.springer.com/mathematics/probability/book/978-0-387-98350-9

PUBLICATIONS: HANDBOOKS & SPECIAL VOLUMES

Rachev, S. T., Probability Metrics and the Stability of Stochastic Models, Wiley, Chichester, New York, 1991
http://books.google.com/books/about/Probability_metrics_and_the_stability_of.html?id=5grvAAAAMAAJ

V. Kashnikov and S. T. Rachev, Mathematical Methods for Construction for Queuing Models, Nauka, (in Russian) 1988; English translation, Wadsworth & Brooks/Cole Advanced Books, 1990.
http://books.google.com/books/about/Mathematical_methods_for_construction_of.html?id=2_V9AAAAIAAJ

A. Kakosyan, L. Klebanov, and S. T. Rachev, Quantitative Criteria for Convergence of Measures, Ajastan Press, 1978 (in Russian)

W. Lindquist and S. Rachev, Mathematical and Empirical Finance, a special issue of the Journal of Risk & Financial Management, 2023

S. T. Rachev, E. Sun, F. Fabozzi, O. Charchano, and Y. Kim, A Quasi-Maximum Likelihood Estimation Strategy for Value-at Risk Forecasting: Application to Equity Index Futures? Markets, Handbook of Financial Econometrics and Statistics, SpringerReference.com April 15, 2013

S. T. Rachev, A. Chernobai, and F. Fabozzi, Composite Goodness-of-Fit Tests for Left Truncated Loss Sample, SpringerReference.com April 15, 2013

S. T. Rachev and F., Fabozzi (Guest Editors), Special Issue on Studies in Mathematical and Empirical Finance, Mathematical Methods of Operations Research, Vol. 69/3, July 2009
http://www.springerlink.com/content/1432-2994/69/3/

SVETLOZAR (ZARI) TODOROV RACHEV

G. Bol, S. T. Rachev, and R. Würth (Editors), Risk Assessment: Decisions in Banking and Finance, Springer/Physika, 2009
http://www.springer.com/business+%26+management/finance/book/978-3-7908-2049-2

S. T. Rachev (Editor), Handbook of Computational and Numerical Methods in Finance, Birkhäuser, 2004
http://www.springer.com/birkhauser/mathematics/book/978-0-8176-3219-9

G. Bol, G. Nakhaeizadeh, S. T. Rachev, T. Rieder, and K. Vollmer (Editors), Credit Risk: Measurement, Evaluations and Management, Springer Verlag, Physika-Verlag Series, 2003
http://www.springer.com/business+%26+management/finance/book/978-3-7908-0054-8

S. T. Rachev (Editor), Handbook of Heavy Tailed Distributions in Finance, North Holland Handbooks of Finance, Elsevier, 2003
http://www.elsevier.com/wps/find/bookdescription.cws_home/622468/description#description

S. T. Rachev (Editor), Mathematical Models in Market and Credit Risk Editor, Mathematical Methods of Operations Research, Vol. 55/2, 2002, Springer

http://www.springerlink.com/content/1432-2994/55/2/

S. Mittnik and S. T. Rachev (Editors), Stable Non-Gaussian Models in Finance and Econometrics, Mathematical and Computer Modeling, 29(10–12), 1999
http://www.sciencedirect.com/science/journal/08957177/29

S. Mittnik and S. T. Rachev (Editors), Distributional Modeling in Finance, Mathematical and Computer Modeling, 29(10–12), 1999
http://www.sciencedirect.com/science/journal/08957177/29

C. Heyde, Yu. Prohorov, R. Pyke, and S. T. Rachev (Editors), Athens Conference on Applied Probability and Time Series Analysis, Springer Verlag, 1995
http://www.springer.com/mathematics/probability/book/978-0-387-94788-4

G. Anastassiou and S. T. Rachev (Editors), Approximation, Probability and Related Fields, Plenum Press, 1994
http://books.google.com/books?id=w-vuAAAAMAAJ&q=Approximation,+Probability+and+Related+Fields&dq=Approximation,+Probability+and+Related+Fields

PUBLICATIONS: PAPERS (2026-2009)

2026

Option Pricing under Stochastic Volatility and Jumps: A PIDE Framework with Empirical Evidence, Abigail Anokyewaa Mensah, Ayush Jha, Hongwei Mei, Rui Wang, Svetlozar T Rachev, Frank J Fabozzi. arXiv.

Downside-Sensitive Portfolio Optimization and Risk Overlays for Real Estate Securities, Dilmi CW Hettiachchi-Halpe-Kankanamalage, Abootaleb Shirvani, Nicholas Appiah, Svetlozar T Rachev, W Brent Lindquist, Frank J Fabozzi, Journal of Risk and Financial Management 19 (6), 385.

Professors Joe Gani and Chris Heyde and Their Contributions to Finance and Risk Management, Shuangzhe Liu, Ross Maller, Svetlozar T Rachev, Journal of Risk and Financial Management 19 (6), 378.

Memory, Roughness, and Information Persistence in Financial Markets: A Structural Approach to Volatility Forecasting, Akash Deep, Nicholas Appiah, Svetlozar T Rachev. arXiv.

Featured Papers in Finance and Society Wellbeing—In Honor of Professors Joe Gani and Chris Heyde, Shuangzhe Liu, Svetlozar T Rachev, Journal of Riskand Financial Management 19 (5), 367.

Pre-Trade Unvertainty and the Subordinated Unvertainty Index, Ayush Jha, Ali Jaffri, Svetlozar T Rachev, Frank J Fabozzi, Available at SSRN 6576880

Constructing Insurable Risk Portfolios: by Edward W. Frees, Chapman & Hall/CRC, 2025, ISBN 9781032745046, Svetlozar T Rachev, Shuangzhe Liu, Technometrics 68 (2), 431-432.

Tail-Aware Portfolio Optimzation for Listed Real-Estate Securities Under Downside Risk, Dilmi CW Hettiachchi-Halpe Kankanamalage, Abootaleb Shirvani, Nicholas Appiah, Svetlozar T Rachev, W Brent Lindquist, Frank J Fabozzi, Preprints.

Asset Pricing in the Presence of Market Friction Noise, Peter Yegon, W Brent Lindquist, Svetlozar T Rachev, Journal of Risk and Financial Management 19 (4), 243.

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Google Trends—Augmented XGBoost for market volatility prediction: A machine learning early warning system, Gagan Deep, Akash Deep, Svetlozar T Rachev, Frank J Fabozzi, Journal of Behavioral and Experimental Finance 49, 101159.

Evaluation Factor Contributions for Sold Homes, Jason R Bailey, W Brent Lindquist, Svetlozar T Rachev, Journal of Risk and Financial Management Vol 19 (2), 146.

Equity-Imposed Tilts in Affine Term Structure Models: Evidence from Option-Implied Asymmetries, Ayush Jha, Ali Jaffri, Svetlozar T Rachev, Frank J Fabozzi, The Journal of Fixed Income.

Operating Imperfect AI: Relability Drift and Human Congestion, Ziyao Wang, Svetlozar T Rachev, ArXiv.

Option-Implied Zero-Coupon Yields: Unifying Bond and Equity Markets, Ting-Jung Lee, W Brent Lindquist, Svetlozar T Rachev, Abootaleb Shirvani, Journal of Risk and Financial Management 19 (1), 91.

Performance and Risk Analytics of Asian Exchange-Traded Funds, Bhathiya Divelgama, Nancy Asare Nyarko, Naa Sackley Dromo Aryee, Abootaleb Shirvani, Svetlozar T Rachev, Journal of Risk and Financial Management 19 (1), 69.

Machine Learning in Finance: Trends, Developments and Business Practices in the Financial Sector Edited by Musa Gun and Burcu Kartal Springer Nature Switzerland AG, 2025, Svetlozar Rachev, International Statistical Review.

Data Science and Risk Analytics in Finance and Insurance Tze Leung Lai and Haipeng Xing, Chapman & Hall/CRC Financial Mathematics Series, Svetlozar Rachev.

New Perspectives in Mathematical and Statistical Methods for Actuarial Sciences and Finance Edited by Michele La Rocca, Massimiliano Menzietti, Cira Perna, and Marilena Sibillo Springer Nature Switzerland AG, 2025, Svetlozar Rachev.

When Equilibrium Exists but Cannot be Implemented, Ziyao Wang, Svetlozar Rachev, Available at SSRN 6149788

Option-Implied Probabilities and Bond Valuation, A Jha, A Jaffri, ST Rachev, FJ Fabozzi, The Journal of Fixed Income 35 (3), 6-17.

2025

A Unified Financial Index for Geopolitical and Environmental Risks: Construction, Risk Management, and Derivative Applications, AM Jaffri, A Shirvani, A Jha, ST Rachev, FJ Fabozzi.

Misspecified Fear or Model Choice? Evidence from Financial Markets, A Jha, F Papazyan, ST Rachev, Evidence from Financial Markets.

Hedging via Perpetual Derivatives: Trinomial Option Pricing and Implied Parameter Surface Analysis, J Gnawali, WB Lindquist, ST Rachev, Journal of Risk and Financial Management 18 (4), 192

Beyond the bid–ask: strategic insights into spread prediction and the global mid-price phenomenon, Y He, A Shirvani, B Shao, S Rachev, F Fabozzi, Econometric Reviews, 1-42

Optimizing portfolios with Pakistan-exposed exchange-traded funds: Risk and performance insight, A Jaffri, A Shirvani, A Jha, ST Rachev, FJ Fabozzi, Journal of Risk and Financial Management 18 (3), 158

Environmental, Social and Governance-Valued Portfolio Optimization and Dynamic Asset Pricing, D Lauria, WB Lindquist, S Mittnik, ST Rachev, Journal of Risk and Financial Management 18 (3), 153

Alternatives to Classical Option Pricing, WB Lindquist, ST Rachev, Annals of Operations Research 346 (1), 489-509
Editorial for the Special Issue of Journal of Risk and Financial Management: Featured Papers in Mathematics and Finance SZT Rachev, WB Lindquist, Journal of Risk and Financial Management 18 (1), 43

2024

Y Hu, WB Lindquist, ST Rachev, FJ Fabozzi, Option Pricing Using a Skew Random Walk Binary Tree, Journal of Risk and Financial Management 17 (4), 138

T. V. Mahanama, A. Shirvani, S. Rachev, and F. J. Fabozzi. The financial market of indices of socioeconomic well-being, Journal of Risk and Financial Management 17 (1), 35, https://doi.org/10.3390/jrfm17010035 (2024)

A. Jha, A. Shirvani, S. T. Rachev, F. J. Fabozzi. Beyond the Traditional VIX: A Novel Approach to Identifying Uncertainty Shocks in Financial Markets. Journal of Risk and Financial Management, 18(1), 11.

SVETLOZAR (ZARI) TODOROV RACHEV

S. Rachev, N. Asare Nyarko, B. Omotade, P. Yegon. Bachelier's market model for ESG asset pricing. Journal of Risk and Financial Management, 17(12), 553.

D. Lauria, J. Park, Y. Hu, W. B. Lindquist, S. T. Rachev, F. J. Fabozzi. An Empirical Implementation of the Shadow Riskless Rate. Risks, 12(12), 187.

W. B. Lindquist, S. T. Rachev. Alternatives to classical option pricing. Annals of Operations Research, 1-21.

J. R. Bailey, W. B. Lindquist, S. T. Rachev. Hedonic Models Incorporating Environmental, Social, and Governance Factors for Time Series of Average Annual Home Prices. Journal of Risk and Financial Management, 17(8), 375.

Shirvani, A., Rachev, S.T., and Fabozzi, F.J. (2024). A rational finance explanation of the stock predictability puzzle. Review of Financial Economics, 42(3), 316–327.

Shirvani, A., Mittnik, S., Lindquist, W.B., and Rachev, S. (2024). Bitcoin Volatility and Intrinsic Time Using Double-Subordinated Lévy Processes. Risks, 12(5), 82.

Abudurexiti, N., He, K., Hu, D., Rachev, S.T., Sayit, H., and Sun, R. (2024). Portfolio analysis with mean-CVaR and mean-CVaR-skewness criteria based on mean–variance mixture models. Annals of Operations Research, 336(1), 945–966.

Hu, Y., Lindquist, W.B., Rachev, S.T., and Fabozzi, F.J. (2024). Option Pricing Using a Skew Random Walk Binary Tree. Journal of Risk and Financial Management, 17(4), 138.

Hu, Y., Lindquist, W.B., and Rachev, S.T. (2024). Sustainability-valued discrete option pricing in complete markets. Journal of Sustainable Finance & Investment, 1–35.

2023

Y. He, Y. Hu, and S. Rachev The implied views of bond traders on the spot equity market, Frontiers in Applied Mathematics and Statistics 9, 1324079,
https://doi.org/10.3389/fams.2023.1324079 (2023)

N. A. Nyarko, B. Divelgama, J. Gnawali, B. Omotade, S. T. Rachev, and P. Yegon. Exploring dynamic asset pricing within Bachelier's market model, Journal of Risk and Financial Management 16 (8), 352. (2023)

L. B. Klebanov, Y. V. Kuvaeva-Gudoshnikova, and S.T. Rachev. Heavy-tailed probability distributions: Some examples of their appearance, Mathematics 11 (14), 3094.(2023)

Y. He and S. Rachev. Exploring implied certainty equivalent rates in financial markets: Empirical analysis and application to the electric vehicle industry, Journal of Risk and Financial Management 16 (7), 344. (2023)

N. Abudurexiti, K. He, D. Hu, S. T. Rachev, H. Sayit, and R. Sun. Portfolio analysis with mean-CVaR and mean-CVaR-skewness criteria based on mean–variance mixture models, Annals of Operations Research, 2023/5/30, 1–22. (2023)

L. Klebanov and S. T. Rachev. Generalized hyperbolic distributions, Journal of Risk and Financial Management 16 (4), 251. (2023)

2022

JR Bailey, D Lauria, WB Lindquist, S Mittnik, ST Rachev. Hedonic Models of Real Estate Prices: GAM Models; Environmental and Sex-Offender-Proximity Factors Journal of Risk and Financial Management 15 (12), 601. (2022).

Y. Hu, W.B. Lindquist, S.T. Rachev, A. Shirvani, F.J. Fabozzi. Market complete option valuation using a Jarrow-Rudd pricing tree with skewness and kurtosis, Journal of Economic Dynamics and Control 137, 104345. (2022).

T. Mahanama, A. Shirvani, A. and S. Rachev. A Natural Disasters Index. Environmental Economics and Policy Studies, 137, 104345, (2022)
https://doi.org/10.1007/s10018-021-00321-x

S.V. Stoyanov, S.T. Rachev, A Shirvani, F.J. Fabozzi. Option pricing in an investment risk-return setting. Applied Economics, 1-14. DOI: 10.1080/00036846.2021.1980490. (2022)

SVETLOZAR (ZARI) TODOROV RACHEV

2021
W.B. Lindquist, and S. T. Rachev. Taylor's law and heavy-tailed distributions, Proceedings of the National Academy of Sciences 118 (50), e2118893118. (2021)

A. Shirvani, F.J. Fabozzi, B. Racheva-Iotova, and S.T. Rachev. Option pricing with greed and fear factor: The rational finance approach, Journal of Derivatives 29 (2), 77–119, (2021)
https://doi.org/10.3905/jod.2021.1.138.

Y. Liu, P. M. Djurić, Y. S. Kim, S. T. Rachev, and J. Glimm. Systemic risk modeling with Lévy copulas, Journal of Risk and Financial Management 14 (6), 251. (2021)

T. Mahanama, A. Shirvani, and S. Rachev. Global index on financial losses due to crime in the United States, J. Risk Financial Manag. 14 (7), 315, (2021).
https://doi.org/10.3390/jrfm14070315

Y. Hu, W. B. Lindquist, and S. T. Rachev. Portfolio optimization constrained by performance attribution, Journal of Risk and Financial Management,14 (5), 201. (2021).

A. Shirvani, S. V. Stoyanov, F. J. Fabozzi, and S. T. Rachev. Equity premium puzzle or faulty economic modelling? Rev Quant Finan Acc. 56, 1329–1342, (2021).
https://doi.org/10.1007/s11156-020-00928.

2020
Y. Hu, A. Shirvani, W. B. Lindquist, F. J. Fabozzi, and S. T. Rachev. Option pricing incorporating factor dynamics in complete markets, Journal of Risk and Financial Management 13 (12), 321, (2020)
https://doi.org/10.3390/jrfm13120321.

A. Shirvani, S. T. Rachev, and F. J. Fabozzi . Multiple subordinated modeling of asset returns: Implications for option pricing, Econometric Reviews, 40 (3), 290–319, (2020)
https://doi.org/10.1080/07474938.2020.1781404.

A. Shirvani, Y. Hu, S. T. Rachev, and F. J. Fabozzi. Option pricing with mixed Lévy subordinated price process and implied probability weighting function, The Journal of Derivatives 28 (2), 102, (2020)
https://doi.org/10.3905/jod.2020.1.102.

A. Shirvani, S. V. Stoyanov, S. T. Rachev, and F. J. Fabozzi. A new set of financial instruments, Front. Appl. Math. 6, 606812, (2020)
https://doi.org/10.3389/fams.2020.606812.

Y. Hu, A. Shirvani, S. Stoyanov, Y. S. Kim, F. J. Fabozzi, and S. T. Rachev. Option pricing in markets with informed traders, International Journal of Theoretical and Applied Finance 23 (6), 2050037, (2020)
https://doi.org/10.1142/S0219024920500375.

2019
S. V. Stoyanov, S. T. Rachev, S. Mittnik, and F. Fabozzi. Pricing derivative in hermite markets, International Journal of Theoretical and Applied Finance 22 (6), (2019)
https://doi.org/10.1142/S0219024919500316.

Y. S. Kim, S. Stoyanov, S. Rachev, and F. J. Fabozzi. Enhancing binomial and trinomial equity option pricing models, Finance Research Letters 28, 185–190. (2019)

2018
Y. S. Kim, S. V. Stoyanov, S. T. Rachev, and F. J. Fabozzi. Another look at the Ho–Lee Bond option pricing model, The Journal of Derivatives 25 (4), 48–53. (2018)

2017
M. L. Bianchi, S. T. Rachev, and F. J. Fabozzi. Tempered stable Ornstein–Uhlenbeck processes: A practical view, Communications in Statistics-Simulation and Computation 46 (1), 423–445. (2017)

G. Torri, R. Giacometti, and S. Rachev. Option pricing in non-Gaussian Ornstein-Uhlenbeck markets, Proceeding of the 11th International Scientific Conference on Financial Management of Firms and Financial Institutions (FRPFI 2017). Ostrava, Czech Republic, 857–865. (2017)

SVETLOZAR (ZARI) TODOROV RACHEV

2016
Y. S. Kim, S. Stoyanov, S. Rachev, and F. Fabozzi. Multi-purpose binomial model: fitting all moments to the underlying geometric Brownian motion, Economics Letters 145, 225–229. (2016)

M. L. Bianchi, S. T. Rachev, and F. J. Fabozzi. Calibrating the Italian smile with time-varying volatility and heavy-tailed models, Computational Economics 51 (3), 339–378. (2016)

2015
Vincenzo Russo, Rosella Giacometti, Svetlozar T. Rachev, and Frank J. Fabozzi. A three-factor model for mortality modeling, North American Actuarial Journal 19 (2), 129–141. (2015)

Barret Pengyuan Shao, Svetlozar Rachev, and Yu Mu. Applied mean-ETL optimization in using earnings forecasts, International Journal of Forecasting 31 (2), 561–567. (2015)

2014
Xiaoping Zhou, Dmitry Malioutov, Frank J. Fabozzi, and Svetlozar Rachev. Smooth monotone covariance for elliptical distributions and applications in finance, Quantitative Finance 14 (9), 1555–1571. (2014)

Michael Stein and Svetlozar Rachev. Dilution of sector exposures: When does unintended indexing happen, Journal of Investment Management 12 (3), 59–72. (2014)

Mahmoud Bekri, Young Shin (Aaron) Kim, and Svetlozar Rachev. Tempered stable models for Islamic finance asset management, International Journal of Islamic and Middle Eastern Finance and Management 7 (1), 37–60. (2014)

2013
Barret Pengyuan Shao and Svetlozar Rachev. Mean-ETL optimization of a global portfolio, The Journal of Investing 22 (4), 115–119. (2013)

Michael Stein, Svetlozar T. Rachev. Performance identification for REITs by using draw measures, International Real Estate Review 16 (3), 230–251. (2013)

J. B. Guerard Jr., S. T. Rachev, and B. P. Shao. Efficient global portfolios: Big data and investment universes, IBM Journal of Research and Development, September/October 2013 57 (5), paper 11. (2013)

Krasimir Milanov, Ognyan Kounchev, Frank J. Fabozzi, Young Shin Kim, and Svetlozar T. Rachev. A binomial-tree model for convertible bond pricing, Journal of Fixed Income 22 (3), 79–94. (2013)

Stoyan V. Stoyanov, Svetlozar T. Rachev, and Frank J. Fabozzi. Computational aspects of risk estimation in volatile markets: Survey, Studies in Nonlinear Dynamics and Econometrics 17 (1), 103–120. (2013)

Sven Klingler, Young Shim Kim, Svetlozar T. Rachev, and Frank J. Fabozzi. Option pricing with time-changed Lévy processes, Applied Financial Economics 23 (15), 1231–1238. (2013)

Stoyan V. Stoyanov, Svetlozar Rachev, and Frank J. Fabozzi. CVaR Sensitivity with respect to tail thickness, Journal of Banking & Finance 37 (3), 977–988. (2013)

2012
Hassan Fallaghoul, S.M. Hashemiparast, Young Shin Kim, Svetlozar T. Rachev, and Frank J. Fabozzi. Approximation of stable and geometric stable distribution, Journal of Statistical and Econometric Methods 1 (3), 97–123. (2012)

Stoyan V. Stoyanov, Svetlozar T. Rachev, and Frank J. Fabozzi. Sensitivity of portfolio VaR and CVaR to portfolio return characteristics, Annals of Operations Research 205, 169–187, (2012).
https://doi.org/10.1007/s10479-012-1142-1.

Naoshi Tsuchida, Xiaoping Zhou, and Svetlozar Rachev. Mean-ETL portfolio selection under maximum weight and turnover constraints based on fundamental security factors, Journal of Investing 21 (1), 14–24. (2012)
http://www.iijournals.com/doi/abs/10.3905/joi.2012.21.1.014

SVETLOZAR (ZARI) TODOROV RACHEV

Young Shin Kim, Frank J. Fabozzi, Zuodong Lin, and Svetlozar T. Rachev. Option pricing and hedging under a stochastic volatility Levy process model, Review of Derivatives Research 15 (1), 81–87, (2012).
https://doi.org/10.1007/s11147-011-9070-9

Stoyan V. Stoyanov, Svetlozar T. Rachev, and Frank J. Fabozzi. Metrization of stochastic dominance rules, International Journal of Theoretical and Applied Finance 15, (2), 1250017, (2012)
http://www.worldscientific.com/doi/abs/10.1142/S0219024912500173

Matthias Scherer, Svetlozar T. Rachev, Young Shin Kim, and Frank J. Fabozzi. Approximation of skewed and leptokurtic return distributions, Applied Financial Economics 22 (16), 1305–1316, (2012)
http://www.tandfonline.com/doi/abs/10.1080/09603107.2012.659342

2011
Jan S. Henneke Mitov, Svetlozar T. Rachev, Frank J. Fabozzi, and Metodi Nikolov. MCMC-based estimation of Markov switching ARMA-GARCH models, Applied Economics 43 (3), 259–271. (2011)
http://www.tandfonline.com/doi/abs/10.1080/00036840802552379

Stoyan Stoyanov, Svetlozar T. Rachev, Boryana Racheva-Yotova, and Frank J. Fabozzi. Fat-tailed models for risk estimation, Journal of Portfolio Management 37 (2) 107–117, (2011).
http://www.iijournals.com/doi/abs/10.3905/jpm.2011.37.2.107

Vygantas Paulauskas, Svetlozar Rachev, and Frank J. Fabozzi. Comment on 'Weak Convergence to a Matrix Stochastic Integral with Stable Processes', Econometric Theory 27 (04), 907–911. (2011)
http://journals.cambridge.org/action/

Young Shin Kim, Svetlozar T. Rachev, Michele Leonardo Bianchi, Ivan Mitov, and Frank J. Fabozzi. Time series analysis for financial market meltdowns, Journal of Banking & Finance 35 (8), 1879–1891. (2011)

Edward Sun, Omid Rezania, Svetlozar T. Rachev, and Frank J. Fabozzi. Analysis of the intraday effects of economic releases on the currency market, Journal of International Money and Finance 30 (4), 692–707, (2011)
http://www.sciencedirect.com/science/article/pii/S0261560611000441

Vincenzo Russo, Rosella Giacometti, Sergio Ortobelli, Svetlozar T. Rachev, and Frank J. Fabozzi. Calibrating affine stochastic mortality models using term assurance premiums, Insurance: Mathematics and Economics 49 (1), 53–60, (2011)
http://www.sciencedirect.com/science/article/pii/S0167668711000229

Michael Stein and Svetlozar T. Rachev. Flow-induced redemption costs in funds of funds, Journal of Derivatives Use, Trading, and Regulation 17 (3), 253–265, (2011)
http://www.palgrave-journals.com/jdhf/journal/v17/n3/abs/jdhf201112a.html

Michael Stein and Svetlozar T. Rachev. Style neutral funds of funds: Portfolio diversification or deadweight? Journal of Asset Management 11 (3), 417–434, (2011).
http://www.palgrave-journals.com/jam/journal/v11/n6/abs/jam20105a.html

Christoph Moller, Svetlozar Rachev, and Frank J. Fabozzi. Balancing energy strategies in electricity portfolio management, Energy Economics 33 (1), 2–11, (2011).
http://www.sciencedirect.com/science/article/pii/S0140988310000605

2010
I. K. Mitov, S. T. Rachev, and F. J. Fabozzi. Approximation of aggregate and extremal losses within the very heavy tails framework, Quantitative Finance 10 (10), 1153–1162, (2010).
http://www.tandfonline.com/doi/abs/10.1080/14697681003718414

M. L. Bianchi, S. T. Rachev, Y. S. Kim, and F. J. Fabozzi. Tempered infinitely divisible distributions and Processes, in Theory of Probability and Its Applications (TVP) (Russia) 55 (1), 59–86, (2010).
http://epubs.siam.org/doi/abs/10.1137/S0040585X97984632

Y. Kim, S. T. Rachev, M. Leonardo Bianchi, and F. Fabozzi. Tempered stable and tempered infinitely divisible GARCH models, Journal of Banking and Finance 34, 2096–2109, (2010).
http://www.sciencedirect.com/science/article/pii/S0378426610000245

SVETLOZAR (ZARI) TODOROV RACHEV

M. J. Grebeck, S. T. Rachev, and F. J. Fabozzi. Stochastic programming and stable distributions in asset liability management, The Journal of Risk 12 (2), 29–47, (2010).
http://www.risk.net/journal-of-risk/technical-paper/2161067/stochastic-programming-stable-distributions-asset-liability-management

M. Stein, S. T. Rachev, and S. Stoyanov. Broad market risk for sector fund of funds: A copula-based dependence approach, Investment Management and Financial Innovations 7 (2), 36–48, (2010).
http://130.203.133.150/viewdoc/summary?doi=10.1.1.180.4555

S. Stoyanov, B. Racheva-Iotova, S. T. Rachev, and F. Fabozzi. Stochastic models for risk estimation in volatile markets: A survey, Annals of Operations Research 176 (1), 293–309, (2010).
http://www.springerlink.com/content/007721l626171804/

S. Serbinenko and S. T. Rachev. A new hybrid model for intraday spot foreign exchange trading accounting for heavy tails and volatility clustering, Journal of Computational Analysis and Applications 12 (1-B), 337–360, (2010).
http://statistik.ets.kit.edu/download/technical_reports/2_new_fx_model.pdf

A. Kabasinkas, S. T. Rachev, L. Sakalauskas, W. Sun, and I. Belovas. Stable mixture model with dependent stats for financial returns series exhibiting short histories and periods of strong passivity, Journal of Computational Analysis and Applications 12 (1-B), 268–292, (2010).

V. Caviezel, S. Ortobelli, and S. Rachev. Semiparametric estimators for heavy-tailed distributions, Journal of Concrete and Applicable Mathematics 8 (1), 150–164, (2010).
http://statistik.ets.kit.edu/download/COR_AMAT_2008.pdf

A. Biglova, S. Ortobelli, S. T. Rachev, and S. Stoyanov. A note on the impact of nonlinear reward and risk measures, Journal of Applied Functional Analysis 5 (2), 194–202, (2010).
http://www.ams.sunysb.edu/~rachev/publication/nonlinear_ratios.pdf

S. Ortobelli, A. Biglova, S. T. Rachev, and S. Stoyanov. Portfolio selection based on a simulated copula, Journal of Applied Functional Analysis 5 (2), 177–193, (2010).
https://statistik.ets.kit.edu/download/JAFA-simulated_copula.pdf

T. Kanamura, S. T. Rachev, and F. Fabozzi. A profit model for spread trading with application to energy futures, The Journal of Trading 5 (1), 48–62, (2010).
http://www.iijournals.com/doi/abs/10.3905/jot.2010.5.1.048

S. T. Rachev, B. Racheva-Iotova, and S. Stoyanov. Capturing fat tails, Risk 23 (5), 72–77, (2010)

Sergio Ortobelli, Svetlozar Rachev, and Frank J. Fabozzi. Risk management and dynamic portfolio selection with stable Paretian distributions, Journal of Empirical Finance 17 (2), 195–211, (2010).
http://www.sciencedirect.com/science/article/pii/S0927539809000656

Young Shin Kim, Svetlozar T. Rachev, Michele Bianchi, and Frank J. Fabozzi. Computing VaR and AVaR in infinitely divisible distributions, Probability and Mathematical Statistics 30 (2010), 223–224, (2010).
http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1400965

A. Biglova, S. Ortobelli, S. Rachev, and F. Fabozzi. Modeling, estimation and optimization of equity portfolios with heavy-tailed distributions, in Optimizing Optimization, The Next Generation of Optimization - Applications and Theory, edited by Stephen Satchel, pp. 117–141. Academic Press/Elsevier, (2010).
https://statistik.ets.kit.edu/download/paperOptimizationbook-Submitted%281%29.pdf

S. Ortobelli, S. Rachev, and F. Fabozzi. Risk management and dynamic portfolio selection with stable Paretian distributions, Journal of Empirical Finance 17 (2), 195–211, (2010).
http://www.sciencedirect.com/science/article/pii/S0927539809000656

I. Mitov, S. T. Rachev, and F. Fabozzi. Approximation of aggregate and extremal losses within the very heavy tails framework, Quantitative Finance 10, 1153–1162, (2010).
http://www.tandfonline.com/doi/abs/10.1080/14697681003718414

SVETLOZAR (ZARI) TODOROV RACHEV

S. T. Rachev, B. Racheva-Iotova, S. Stoyanov, and F. Fabozzi. Risk management and portfolio optimization for volatile markets, in The Handbook of Portfolio Construction: Contemporary Applications of Markowitz Techniques, edited by John Guerard, Jr., pp. 493–508. Springer, (2010).
http://www.springerlink.com/content/v126080q46u82855/

S. Stoyanov, B. Racheva-Iotova, S. T. Rachev, and F. Fabozzi. Stochastic models for risk estimation in volatile markets: A survey, Annals of Operations Research 176 (1), 293–309, (2010).
https://doi.org/10.1007/s10479-008-0468-1

E. Sereda, E. Bronshtein, S. T. Rachev, F. Fabozzi, W. Sun, and S. Stoyanov. Distortion risk measures in portfolio optimization, in The Handbook of Portfolio Construction: Contemporary Applications of Markowitz Techniques, edited by John Guerard, Jr., pp. 493–508. Springer, (2010)
http://www.springerlink.com/content/x6627vl731282338/

S. Ortobelli, S. T. Rachev, and F. Fabozzi (2010) Risk Management and Dynamic Portfolio Selection with Stable Paretian Distributions, Journal of Empirical Finance in honor of Benoit Mandelbrot 17 (2), 195–211, (2010).
http://www.sciencedirect.com/science/article/pii/S0927539809000656

B. Michele Leonardo, S. T. Rachev, Y. Kim, and F. Fabozzi. Tempered Stable Distributions and Processes in Finance: Numerical Analysis, in Mathematical Methods for Actuarial Sciences and Finance, edited by M. Corazza and C. Pizzi, pp. 33–42. Springer, (2010).
http://www.springerlink.com/content/p6gll77127061w27/

Michael Stein, Svetlozar T. Rachev, and Stoyan V. Stoyanov. Broad market risk for sector funds of funds: A copula-based dependence approach, Journal of Investment Management and Financial Innovation 7 (2), 36–44, (2010).
http://businessperspectives.org/journals_free/imfi/2010/imfi_en_2010_02_Stein.pdfdisplayFulltext?type=1&fid=8325136&jid=ECT&volumeId=27&issueId=04&aid=8325134

2009
S. Kring, S. T. Rachev, M. Hochstotter, F. Fabozzi, and M. Leonardo Bianchi. Multi-tail elliptical distributions, The Econometrics Journal 12 (2), 272–29, (2009).

S. Menn and S. T. Rachev. Smoothly truncated stable distributions, GARCH-models, and option pricing, Mathematical Methods in Operational Research 69, 411–438, (2009).

S. V. Stoyanov, S. T. Rachev, and F. Fabozzi. Construction of probability metrics on classes of investors, Economics Letters 103, 45–48, (2009).

W. Sun, S. T. Rachev, F. Fabozzi, and P. Kalev. A new approach to modeling co-movement if international equity markets: evidence of unconditional copula-based simulation of tail dependence, Empirical Economics 36, 201–229, (2009).

D. Wang, S. Rachev, and F. Fabozzi. Pricing of credit default index swap tranches with one-factor heavy-tailed copula models, Journal of Empirical Finance 16, 201–215, (2009).

D. Wang, S. Rachev, and F. Fabozzi. Pricing tranches of a CDO and SDS index: Recent advances and future research, Journal of Empirical Finance 16, 263–286, (2009).

Wang, D., Rachev, S., Fabozzi, F., Pricing of Credit Default Index Swap Tranches with One-Factor Heavy-Tailed Copula Models, in Journal of Empirical Finance, Vol. 16, 201-215, (2009).

Wang, D., Rachev, S., Fabozzi, F., Pricing Tranches of a CDO and SDS Index: Recent Advances and Future Research, in Journal of Empirical Finance, Vol 16 263-286, (2009).

Serbinenko, A., Rachev, S. T., Intraday spot foreign exchange market. Analysis of efficiency, liquidity and volatility, in Investment Management and Financial Innovations, 6/4, 35-45, (2009).

Fraenkle, J., Rachev, S. T.: Review: Algorithmic Trading, in Investment Management and Financial Innovations, Vol. 6, issue 1, 7-20, (2009).

Stein, M., Rachev, S. T., Stoyanov, S., R-ratio optimization with heterogeneous assets using genetic algorithm, in Investment Management and Financial Innovations, 6/ 2, 117-134, (2009).

SVETLOZAR (ZARI) TODOROV RACHEV

Papenbrock, J., Rachev, S. T., Hoechstoetter, M., Fabozzi, F., Price calibration and hedging of correlation dependent credit derivatives using structural model with alpha-stable distributions, in Applied Financial Economics, 19/17, 1401-1416, (2009).

Sun W., Rachev, S. T., Fabozzi, F., A new approach for using Levy processes for determining high-frequency value-at-risk predictions, in European Financial Management, 15/2, 340-361, (2009).

Kabasinskas, A., Rachev, S. T., Sakalauskas, L., Sun, W., Belovas, I., Alpha-stable paradigm in financial markets, in Journal of Computational Analysis and Applications, 11/4, 641-668, (2009).
Biglova, A., Rachev, S. T., Stoyanov, S., Ortobelli, S., Analysis of the Factors Influencing Momentum Profits, in Journal of Computational Analysis and Applications, Vol.4, No1, 2009,81-106, (2009).

Rachev, S.T., Stein, M., Sun, W., Copula Concepts in Financial Markets, in Portfolio Institutionell, 4, 12 – 15, (2009).

Wang, D., Rachev, S., Fabozzi, F., Pricing Tranches of a CDO and SDS Index: Recent Advances and Future Research in: G. Bol et al. (eds.), Risk Assessment: Decisions in Banking and Finance, Springer/Physika, 263-286, (2009).

Kim, Y.S., Rachev, S.T., Bianchi, M.-L., Fabozzi, F., A new tempered stable distribution and its application to finance, in: G. Bol et al. (eds.), Risk Assessment: Decisions in Banking and Finance, Springer/Physika, 77-110, (2009).

Kring, S., Rachev, S., Höchstötter, M., Fabozzi, F., Estimation of Alpha-Stable Sub-Gaussian Distributions for Assets Returns, in: G. Bol et al. (eds.), Risk Assessment: Decisions in Banking and Finance, Springer/Physika, 111-152, (2009).

Rachev, S., Martin, B., Racheva-Iotova, B., Stoyanov, S., Stable ETL optimal portfolios and extreme risk management, in: G. Bol et al. (eds.), Risk Assessment: Decisions in Banking and Finance, Springer/Physika, 235-262, (2009).

Georgi K. Mitov, Svetlozar T. Rachev, Young Shin Kim, and Frank J. Fabozzi. “Barrier Option Pricing by Branching Processes.” International Journal of Theoretical and Applied Finance, Vol. 12, No. 7, pp. 1055-1073, (2009).

A. Serbinenko and S. T. Rachev. Intraday spot foreign exchange market. Analysis of efficiency, liquidity and volatility, in Investment Management and Financial Innovations, 6/4, 35-45, (2009).

J. Fraenkle and S. T. Rachev. Review: Algorithmic trading, Investment Management and Financial Innovations 6 (1), 7–20, (2009).

M. Stein, S. T. Rachev, and S. Stoyanov. R-ratio optimization with heterogeneous assets using genetic algorithm, Investment Management and Financial Innovations 6 (2), 117–134, (2009).

J. Papenbrock, S. T. Rachev, M. Hoechstoetter, and F. Fabozzi. Price calibration and hedging of correlation dependent credit derivatives using structural model with alpha-stable distributions, Applied Financial Economics 19 (17), 1401–1416, (2009).

W. Sun, S. T. Rachev, and F. Fabozzi. A new approach for using Levy processes for determining high-frequency value-at-risk predictions, European Financial Management 15 (2), 340–361, (2009).

A. Kabasinskas, S. T. Rachev, L. Sakalauskas, W. Sun, and I. Belovas. Alpha-stable paradigm in financial markets, Journal of Computational Analysis and Applications 11 (4), 641–668, (2009).

A. Biglova, S. T. Rachev, S. Stoyanov, and S. Ortobelli. Analysis of the factors influencing momentum profits, Journal of Computational Analysis and Applications 4 (1), 81–106, (2009).

S. T. Rachev, M. Stein, and W. Sun. Copula concepts in financial markets, Portfolio Institutionell 4, 12–15, (2009).

D. Wang, S. Rachev, and F. Fabozzi. Pricing tranches of a CDO and SDS index: Recent advances and future research, in Risk Assessment: Decisions in Banking and Finance, edited by G. Bol et al., pp. 263–286. Springer/Physika, (2009).

Y. S. Kim, S. T. Rachev, M.-L. Bianchi, and F. Fabozzi. A new tempered stable distribution and its application to finance, in Risk Assessment: Decisions in Banking and Finance, edited by G. Bol et al., pp. 77–110. Springer/Physika, (2009).

S. Kring, S. Rachev, M. Höchstötter, and F. Fabozzi. Estimation of alpha-stable sub-gaussian distributions for assets returns, in Risk Assessment: Decisions in Banking and Finance, edited by G. Bol et al., pp. 111–152. Springer/Physika, (2009).

SVETLOZAR (ZARI) TODOROV RACHEV

S. Rachev, B. Martin, B. Racheva-Iotova, and S. Stoyanov. Stable ETL optimal portfolios and extreme risk management, in Risk Assessment: Decisions in Banking and Finance, edited by G. Bol et al., pp. 235–262. Springer/Physika, (2009).

Georgi K. Mitov, Svetlozar T. Rachev, Young Shin Kim, and Frank J. Fabozzi. Barrier option pricing by branching processes, International Journal of Theoretical and Applied Finance 12 (7), 1055–1073, Pages 117-134, (2009).

EARLIER PUBLICATION (2008-1977)

2008

S. Stoyanov, S. T. Rachev, S. Ortobelli, and F. Fabozzi. Relative deviation metrics and the problem of strategy replication, Journal of Banking and Finance 32, 199–206, (2008).

S. Rachev, S. Ortobelli, S. Stoyanov, and F. Fabozzi. Desirable properties of an ideal risk measure in portfolio theory, International Journal of Theoretical and Applied Finance 1 (1), 19 – 54, (2008).

S. Sun, S. T. Rachev, F. Fabozzi, and P. Falev. Fractals in trade duration: Capturing long-range dependence and heavy tailedness in modelling trade duration, Annals of Finance 4, 217–241, (2008).

Y. S. Kim, S. T. Rachev, M.-L. Bianchi, and F. Fabozzi. Financial market models with Levy processes and time-varying volatility, Journal of Banking and Finance 32 (7),1363–1378, (2008).

W. Sun, S. T. Rachev, S. Stoyanov, and F. Fabozzi. Multivariate skewed Student's t copula in analysis of nonlinear and asymmetric dependence in German equity market, Studies in Nonlinear Dynamics & Econometrics 12 (2/3), 1–35, (2008).

R. Giacometti, S. Rachev, A. Chernobai, and M. Bertocchi. Aggregation Issues in Operational Risk, The Journal of Operational Risk 3 (3), 3–23, (2008).

S. Ortobelli, S., Rachev, H., Shalit, and F. Fabozzi. Orderings and risk probability functionals in portfolio theory, Probability and Mathematical Statistics 28 (2), 203–234, (2008).

R. Giacometti and S. T. Rachev. Funds of hedge funds: A comparison among different portfolio optimization models implementing the zero-investment strategy, Investment Management and Financial Innovations 5 (3), 19–29, (2008).

A. Biglova, T. Kanamura, S. T. Rachev, and S. Stoyanov. Modeling, risk assessment and portfolio optimization of energy futures, Investment Management and Financial Innovations 5 (1), 17–31, (2008).

M. Stein, S. T. Rachev, and W. Sun. The world of funds of funds, Investment Management and Financial Innovations 5 (2), 7–15, (2008).

S. T. Rachev, W. Sun, and F. Fabozzi. A new solution for finance-stable family models, Karlsruhe Transfer 37, 26–27, (2008).

F. Hansen, S. Rachev, and S. Trueck. Hedgefonds im Risikomanagement, Risiko-Manager 2008, 190–199, (2008).

S. Rachev, Every risk also holds an opportunity, Interview for Financial Services Inside, September 2008, page 8, (2008).

W. Sun, S. T. Rachev, and F. Fabozzi. Long-range dependence, fractal processes, and intraday trading, in Handbook on Information Technology in Finance, edited by Detlef Seese, Christof Weinhardt, and Frank Schlottmann, pp. 543–586. Springer, (2008).

B. Bagasheva, S. T. Rachev, J. Hsu, and F. Fabozzi. Bayesian applications to the investment management process, in Handbook on Information Technology in Finance, edited by Detlef Seese, Christof Weinhardt, and Frank Schlottmann, pp. 587–612. Springer, (2008).

Y. Kim, S. T. Rachev, D. M. Chung, and M. Bianchi. A modified tempered stable distribution with volatility clustering, in New Developments in Financial Modeling, edited by J. O. Soares, J. P. Pinam and M. C. Lopes, pp. 344–365. Cambridge Scholars Publishing, (2008).

S. Safari, W. Sun, D. Seese, and S. T. Rachev. Realized volatility and correlation estimators under non-Gaussian microstructure noise, in Economic Dynamics Theory, Games and Empirical Studies, edited by Chester W. Hurlington, pp. 173–199. NOVA Science Publishers, (2008).

SVETLOZAR (ZARI) TODOROV RACHEV

S. T. Rachev, C. Menn, and F. Fabozz. Risk measures and portfolio selection, in Handbook of Finance, Vol. 3, edited by Frank. J. Fabozzi, pp. 101–108. John Wiley & Sons, (2008).

S. T. Rachev, C. Menn, and F. Fabozzi. Black-Scholes option pricing model, I: Handbook of Finance, Vol. 3, edited by Frank J. Fabozzi, pp. 459–466. John Wiley & Sons, (2008).

M. Hoechstoetter, S. T. Rachev, and F. Fabozzi. Basic data description for financial modeling and analysis, in Handbook of Finance, Vol. 3, edited by Frank J. Fabozzi, pp. 633–644. John Wiley & Sons, (2008).

S. T. Rachev, S. Mittnik, F. Fabozzi, S. Focardi, and T. Jasic. Regression analysis, in Handbook of Finance, Vol. 3, edited by Frank J. Fabozzi, pp. 669–687, John Wiley & Sons, (2008).

2007

S. T. Rachev, T. Jašić, S. Stoyanov, and F. Fabozzi. Momentum strategies based on reward–risk stock selection criteria, Journal of Banking and Finance 31 (8), 2325–2346, (2007).

S. Rachev, S. Stoyanov, C. Wu, and F. Fabozzi. Empirical analyses of industry stock index return distributions for the Taiwan Stock Exchange, Annals of Economics and Finance 1, 21–31, (2007).

R. Giacometti, S. Rachev, A. Chernobai, M. A. Bertocchi, and G. Consigli. Heavy-tailed distributional model for operational losses, The Journal of Operational Risk 2 (1), 55–90, (2007).

C. Marinelli, S. D'Addona, and S. T. Rachev. A comparison of some univariate models for value-at-risk and expected shortfall, International Journal of Theoretical and Applied Finance 10 (6), 1043–1075, (2007).

W. Sun, S. T. Rachev, and F. Fabozzi. Fractal or I.I.D.: Evidence of long-range dependence and heavy tailedness in modelling German equity market volatility, Journal of Economics and Business 59, 575–595, (2007).

M. Bierbrauer, C. Menn, S. T. Rachev, and S. Trück. Spot and derivative pricing in the EEX power market, Journal of Banking and Finance 31, 3462–3485, (2007).

S. Stoyanov, S. T. Rachev, and F. Fabozzi. Optimal financial portfolios, Applied Mathematical Finance 14 (5), 401–436, (2007).

G. Samorodnitsky, S. T. Rachev, J. Kurz-Kim, and S. Stoyanov. Asymptotic distribution of unbiased linear estimators in the presence of heavy-tailed regressors and residuals, Probability and Mathematical Statistics 27, 275–302, (2007).

R. Giacometti, R., Bertocchi M., S. T. Rachev, and F. Fabozzi. Stable distributions in the Black-Litterman approach to asset allocation, Quantitative Finance 7, 423–433, (2007).

M. Prokopczuk, S.T. Rachev, G. Schindlmayr, and S. Trück. Quantifying risk in the electricity business: A RAROC-based approach, Energy Economics 29 (5), 1033–1049, (2007).

D. De Giovanni, S. Ortobelli, and S. T. Rachev. Delta hedging strategies comparison, European Journal of Operational Research 185 (3), 1615–1631, (2007).

A. Biglova and S. Rachev. Portfolio performance attribution, Investment Management and Financial Innovations 4 (3), 7–22, (2007).

De Giovanni, D., Ortobelli, S., Rachev, S. T., Delta hedging strategies comparison, in European Journal of Operational Research, 185/3, 1615-1631, (2007).

Biglova, A., Rachev S. Portfolio Performance Attribution, in Investment Management and Financial Innovations, 4/3, 7-22, (2007).

SVETLOZAR (ZARI) TODOROV RACHEV

2006

C. Menn and S. Rachev. Calibrated FFT-based density approximations of stable distributions, Computational Statistics and Data Analysis 50 (8), 1891–1904, (2006).

J. Hernandez and S. Rachev Construction of Levy drivers for financial models, Journal of Computational Analysis and Applications 8 (4), 335-356, (2006).

Y. Zhang and S. Rachev. Risk attributions and portfolio performance measurements, Journal of Applied Functional Analysis 4 (1), 373–402, (2006).

A. Chernobai and S. Rachev. Applying robust methods to operational risk modelling, Journal of Operational Risk 1 (1), (2006).

S. Stoyanov, G. Samorodnitsky, S. Rachev, and S. Ortobelli. Computing the portfolio conditional value-at-risk in the a-stable case, Probability and Mathematical Statistics 26, 1–22, (2006).
F. Lamantia, S. Ortobelli, and S. T. Rachev. An empirical comparison among VaR models and time rules with elliptical and stable distributed returns, Investment Management and Financial Innovations 3, 8–29, (2006).

F. Lamantia, S. Ortobelli, and S. T. Rachev. VaR, CVaR and time rules with elliptical and asymmetric stable distributed returns, Investment Management and Financial Innovations 4, 19–39, (2006).

A. Chernobai, K. Burnecki, S. Rachev, S. Trück, and R. Weron. Modelling catstrophe claims with left-truncated severity distribution, Computational Statistics 21, 537–555, (2006).

F. Hausen, S. Rachev, and S. Trück. Eine empirische Untersuchung der Performance und Faktorenbestimmung von Hedgefonds, Risiko-Manager 6 (4), (2006).

F. Hausen, S. Rachev, and S. Trück. Performance-Analyse und Style Factors von Hedgefonds, Risiko-Manager 6 (3), (2006).

F. Hausen, S. Rachev, and S. Trück. Klassifikation und Anlagestrategien von Hedgefond, Risiko-Manager 6 (2), (2006).

S. T. Rachev, A. Chernobai, and C. Menn empirical examination of operational loss distributions, in Perspectives on Operational Research, edited by M. Morlock et al., pp. 379–401. Deutscher Universitaet-Verlag/GWV Fachverlage GmbH, (2006).

2005

C. Menn and S. Rachev. A GARCH option pricing model with-stable innovations, European Journal of Operations Research 163 (1), 201–209, (2005).

S. Ortobelli, S. Rachev, S. Stoyanov, F. Fabozzi, and A. Biglova. The proper use of risk measures in portfolio theory, International Journal of Theoretical and Applied Finance 8 (8), 1107–1133, (2005).

M. Bertocchi, R. Giacometti, S. Ortobelli, and S. Rachev. The impact of different distributional hypothesis on returns in asset allocation, Finance Letters 3 (1), 17–27, (2005).

M. Grebeck and S. T. Rachev. Stochastic programming methods in asset-liability management, Investment Management and Financial Innovations 1, 82–90, (2005).

M. Hoechstoetter, S. T. Rachev, and F. Fabozzi. Distributional analysis of the stocks comprising the DAX 30, Probability and Mathematical Statistics 25 (2), 363–383, (2005).

S. Trück and S. T. Rachev (2005) Credit portfolio risk and PD confidence sets through the business cycle, Journal of Credit Risk 1 (4), (2005).

C. Muggele, S. T. Rachev, and S. Trück. Stable modeling of different European power markets, Investment Management & Financial Innovations 3, 37–42, (2005).

A. Chernobai, C. Menn, S. Rachev, and S. Trueck. A note on the estimation of the frequency and severity distribution of operational losses, Mathematical Scientist 30 (2), 87–97, (2005).

SVETLOZAR (ZARI) TODOROV RACHEV

S. Rachev, S. Stoyanov, A. Biglova, and F. Fabozzi. An empirical examination of daily stock return distributions for U.S. stocks, in Data Analysis and Decision Support, Springer Series in Studies in Classification, Data Analysis, and Knowledge Organization, edited by Daniel Baier, Reinhold Decker, and Lars Schmidt-Thieme, pp. 269–281. Springer-Verlag, (2005).

2004
A. Biglova, S. Ortobelli, S. Rachev, and S. Stoyanov. Different approaches to risk estimation in portfolio theory, Journal of Portfolio Management 31, 103–112, (2004).

S. Trueck, M. Laub, and S. Rachev. The term structure of credit spreads and credit default swaps – An empirical investigation, Investment Management & Financial Innovations 3 (2004).

A. Biglova, S. Rachev, T. Jacis, and F. Fabozzi. Profitability of momentum strategies: application of novel risk/return ratio stock selection criteria, Investment Management and Financial Innovations 4, 48–62, (2004).

F. Hausen, S. Rachev, and S. Trueck (2004) Basel II: Letzte Änderungen der Risikogewichtskurve im IRB-Ansatz, Kreditwesen, 23 (2004).
F. Lamantia, S. Ortobelli, and S. Rachev. Time-scale transformations: Effects on VaR models, Lecture Notes in Computer Science 3039, 779–786, (2004).

A. Biglova and S. Rachev .Profitability of momentum strategies, in Proceedings of the 6th International Workshop on Computer Science and Information Technologies CSIT.2004, Budapest, Hungary, 216–220, (2004).

S. Ortobelli, S. Rachev, I. Huber, and A. Biglova. Optimal portfolio selection and Risk management: A comparison between the stable Paretian approach and the Gaussian one, in Handbook of Computational and Numerical Methods in Finance, edited by S. Rachev, pp. 197–252. Birkhauser, (2004).

I. Khindanova, Z. Atakhanova, and S. Rachev. GARCH-type processes in modeling energy prices, in Handbook: Computational and Numerical Methods in Finance, pp. 69–112. Birkhäuser, (2004).

B. Martin, S. Rachev, and E. Schwartz. Optimal portfolio selection and risk management: A comparison between the stable Paretian approach and the Gaussian one, in Handbook: Computational and Numerical Methods in Finance, pp. 197–252. Birkhäuser, (2004).

S. Rachev, S. Ortobelli, and E. Schwartz. The problem of optimal asset allocation with stable distributed returns, stochastic processes and functional analysis, in Lecture Notes in Pure and Applied Mathematics, edited by A. C. Krinik and R. J. Swift, pp. 295–347. Marcel Dekker, (2004).

A. Biglova, S. Ortobelli, S. Rachev, and S. Stoyanov. Optimal portfolio selection and risk management: A comparison between the stable Paretian approach and the Gaussian one, in Handbook of Computational and Numerical Methods in Finance, pp. 197–252. Birkhäuser, (2004).

A. Chernobai and S. Rachev. Stable modelling of operational risk, in Operational Risk Modelling and Analysis. Theory and Practice, edited by M. G. Cruz, pp. 139–169. Risk Books, (2004).

J. Deidersen, P. Niebling, S. Rachev, and S. Trueck. Loss given default und recovery rates - eine Einfürung, in Modernes Risikomanagment, edited by Frank Romeike, p. 9. Wiley, (2004).

S. Rachev, S. Trueck, and R. Weron. Risk management in power markets - Advanced spot price models and value-at-risk approaches (Risikomanagement in Energiemarkten: Fortgeschrittene Spotpreismodelle und VaR- Anstze), RiskNews 5 (2004) (in German)

2003
Y. Tokat, S. Rachev, and E. Schwartz. The stable non-Gaussian asset allocation: A comparison with the classical gaussian approach, Journal of Economic Dynamics and Control 27, 937–969, (2003).

V. Paulauskas and S. Rachev. Maximum likelihood estimators in regression models with infinite variance innovations, Statistical Papers 44, 47–65, (2003).

S. Ortobelli, I. Huber, S. Rachev, and E. Schwartz. Portfolio choice theory with non-gaussian distributed returns, in Handbook of Heavy Tailed Distributions in Finance, Series Editor, W. Ziemba, pp. 205–441, (2003).

SVETLOZAR (ZARI) TODOROV RACHEV

D. Martin, S. T. Rachev, and F. Siboulet. Wilmott Phi-alpha optimal portfolios and extreme risk management, Magazine of Finance 2003, 70–83, (2003).

B. Martin, S. Rachev, and E. Schwartz. Stable non-Gaussian models for credit risk management, in Handbook of Heavy Tailed Distributions in Finance, North Holland Handbooks of Finance, Series Editor, W. T. Ziemba, pp. 405–441, (2003).

S. Mittnik, S. Rachev, and E. Schwartz. Value-at-risk and asset allocation with stable return distributions, Allgemeines Statistisches Archiv 86, 53–67, (2003).

T. Tokat, S. Rachev, and E. Schwartz. Asset liability management; A review and some new results in the presence of heavy tails, in Handbook of Heavy Tailed Distributions in Finance, North Holland Handbooks of Finance, Series Editor, W. T. Ziemba, pp. 509–546, (2003).

B. Racheva-Iotova, S. Rachev, and S. Stoyanov. Stable non-Gaussian credit risk model; The cognity approach, in Credit Risk (Measurement, Evaluations and Management), edited by G. Bol, G. Nakhaheizadeh, S. Rachev, T. Rieder, and K. H. Vollmer, pp. 179–198. Physica-Verlag, (2003).

S. Rachev, I. Khindanova, and E. Schwartz. Stable modeling of market and credit value at risk, in Handbook of Heavy Tailed Distributions in Finance, North Holland Handbooks of Finance, Series Editor, W. T. Ziemba, pp. 249–328, (2003).

S. Ortobelli, I. Huber, M. Hoechstoetter, and S. Rachev. A comparison among Gaussian and non-Gaussian portfolio choice models, in Modeling and Control of Economic System 2001, edited by R. Neck, pp. 225–230. ElsevierScience, (2003).

S. Benzin, S. Rachev, and S. Trueck. Approaches to credit risk in the New Basel Accord in in Credit Risk (Measurement, Evaluations and Management), edited by G. Bol, G. Nakhaheizadeh, S. Rachev, T. Rieder, and K. H. Vollmer, pp. 1–34. Physica-Verlag, (2003).

S. Trueck, J. Deidersen, and S. Rachev. Default recovery rates II – Impact factors and estimation of average recovery rates, Risk News 1 (2003).

2002

S. Mittnik, M. S. Paolella, and S. T. Rachev. Stationarity of stable power-GARCH process, Journal of Econometrics 106, 97–107, (2002).

M. Kelbert, S. T. Rachev, and Y. Suhov. The maximum of a tree-indexed random process, with applications, Amer. Math. Soc. Transl.207 (2), 115–131, (2002).

S. T. Rachev, D. Donchev, and D. Steigerwald. Optimal policies for investment with time-varying return distributions, Journal of Computational Analysis and Applications 4, 269–312, (2002).

T. Dognanoglu, S. Mittnik, and S. T. Rachev. Portfolio selection in the presence of heavy-tailed asset returns, in Contributions to Modern Econometrics: From Data Analysis to Economic Policy, pp. 51–64. Kluwer, (2002).

S. Trueck, S. T. Rachev, and J. Deidersen. Default recovery rates I, Risk News 11/12 (02), 7–19, (2002).

2001

S. T. Rachev and G. Samorodnitsky. Long strange segments in a long-range-dependent moving average, Stochastic Processes and Their Applications 93, 119–148, (2001).

S. T. Rachev, I. Khindanova, and E. Schwarz. Stable modelling of value at risk, Mathematical and Computer Modelling 34, 1223–1259, (2001).

C. Marinelli, S. T. Rachev, and R. Roll. Subordinated exchange rate models: Evidence for heavy tailed distributions and long-range dependence, Mathematical and Computer Modelling 34, 955–1001. Outlier Detection in Heavy-Tailed Samples, (2001).

S. T. Rachev, S. Mittnik, and V. Paulauskas (2001) Statistical inference in regression with heavy-tailed integrated variables, Mathematical and Computer Modelling 34, 1145–1158, (2001).

S. Mittnik, S. T. Rachev, and G. Samorodnitsky. The distribution of test statistics for outlier detection in heavy-tailed samples, Mathematical and Computer Modelling 34, 1171–1183, (2001).

SVETLOZAR (ZARI) TODOROV RACHEV

P. Mansfield, S. T. Rachev, and G. Samorodnisky. Long strange segments of a stochastic process, Annals of Applied Probability 11, 878–921, (2001).

S. Ortobelli and S. T. Rachev. Safety-first analysis and stable Paretian approach to portfolio choice theory, Mathematical and Computer Modelling 34, 1037–1072, (2001).

S. Mittnik and S. T. Rachev. The GARCH-stable option pricing model, Mathematical and Computer Modelling 34, 1199–1212, (2001).

T. Link, S. Trueck, and S. T. Rachev. New tendencies in rating SMEs with respect to Basel II, Informatica 12 (4), 593–610, (2001).

B. Martin and S. T. Rachev. A stable co-integrated VAR model for credit returns with time-varying volatility, Proceedings of the IFAC Symposium on Modelling and Control of Economic Systems (SME) 2001, 146-149, (2001).

Z. Atakhanova, I. Khindanova, and S. T. Rachev. Stable modelling of energy risk, Proceedings of the IFAC Symposium on Modelling and Control of Economic Systems (SME) 2001, 123–126, (2001).

S. Ortobelli, I. Huber, M. Hoechstoetter, and S. T. Rachev. A comparison among Gaussian and non-Gaussian portfolio choice models, Proceedings of the IFAC Symposium on Modelling and Control of Economic Systems (SME) 2001, 171–174, (2001).

C. Marinelli and S. T. Rachev. Stable models in finance with applications to market risk management, Proceedings of the IFAC Symposium on Modelling and Control of Economic Systems (SME) 2001, 143–144, (2001).

I. Khindanova, S. T. Rachev, and B. D. Athanasopoulos. Regulation and risk management in the Greek financial markets, Proceedings of the IFAC Symposium on Modelling and Control of Economic Systems (SME), 183–188, (2001).

L. Klebanov, T. Kozubowski, S. T. Rachev, and V. Volkovich. Characterization of distributions symmetric with respect to a group of transformations and testing of corresponding statistical hypothesis, Statistical & Probability Letters 53, 241–247, (2001).

2000

L. Klebanov, S. Mittnik, S. T. Rachev, and V. Volkovich. A New Representation for the Characteristic Function of Strictly Geo-Stable Vectors, Journal of Applied Probability, 37, 1137-1142, (2000).

L. Klebanov, S. T. Rachev, and M. Safarian. Local Pre-limit theorems and their applications to finance, Applied Mathematics Letters, 13, 73-78, (2000).

S. Han and S. T. Rachev. Portfolio management with stable distributions, Mathematical Methods of Operations Research, 51, 341-352, (2000).

I. Khindanova and S. T. Rachev. Value-at-Risk: Recent Advances, Handbook of Analytic- Computational Methods in Applied Mathematics, 2000, 801-858, (2000).

S. T. Rachev and Y. Tokat. Asset and liability management: recent advances, Handbook of Analytic-Computational Methods in Applied Mathematics 2000, 859–908, (2000).

S. Mittnik, C. Paolella, and S. T. Rachev. Diagnosing and treating the fat tails in financial returns data, Journal of Empirical Finance 7, 389–416, (2000).

I. Khindanova and S. T. Rachev. Value-at-risk: Recent advances, Journal Risk Analysis 2, 45–76, (2000).

V. R. Haynatzka, J. Gani, and S. T. Rachev. A steady-state model for the spread of HIV among drug users, Mathematical and Computer Modelling 32 (1/2), 81–195, (2000).

V. R. Haynatzka, J. Gani, and S. T. Rachev. The spread of AIDS among interactive transmission groups, Mathematical and Computer Modelling 32 (1/2), 169–180, (2000).

C. Marinelli and S. T. Rachev. Computational issues in stable financial modelling, Applied Mathematics Reviews 1, 285–327, (2000).

E. Schwartz, G. Götzenberger., and S. T. Rachev. Performance measurements: The stable Paretian approach, Applied Mathematics Reviews 1, 329–406, (2000).

SVETLOZAR (ZARI) TODOROV RACHEV

1999

S. T. Rachev and M. Dall'Aglio. Metrization of epi-convergence: An application to the strong consistency of M-estimators, Journal of Computational Analysis and Applications 1, 63–86, (1999).

S. T. Rachev and I. Olkin. Mass transportation problems with capacity constraints, Journal of Applied Probability 36, 433–445, (1999).

S. T. Rachev, S. Mittnik, and G. Samorodnitski. Testing for structural breaks in time series regressions with heavy-tailed disturbances, in Datamining and Computational Finance, pp. 115–142. Physica-Verlag, (1999).

S. T. Rachev, S. Hurst, and E. Platen. Option pricing for a logstable asset price model, Distributional Modelling in Finance, Mathematical & Comp. Modelling 29, 105–119, (1999).

S. T. Rachev, A. Weron, and K. Weron. CED model for asset returns and fractal market hypothesis, Distributional Modelling in Finance, Mathematical & Comp. Modelling 29, 23–36, (1999)

S. T. Rachev, S. A. Dostoglou, and S. Mittnik. Stable distributions and the term of structure of interest rates, Distributional Modelling in Finance, Mathematical & Comp. Modelling 29, 57–60, (1999).

S. T. Rachev and T. Kozubowski. Univariate geometric stable laws, Journal of Computational Analysis and Applications 1, 177–217, (1999).

S. T. Rachev and T. Kozubowski. Multivariate geometric stable laws, Journal of Computational Analysis and Applications 4, 349–385, (1999).

S. T. Rachev and B. Gamrowski. A testable version of the Pareto-stable CAPM, Distributional Modelling in Finance, Mathematical & Comp. Modelling 29, 61–81, (1999).

S. T. Rachev and S. Mittnik. Option pricing for stable and infinitely divisible asset returns, Distributional Modelling in Finance, Mathematical & Comp. Modelling 29, 93–104, (1999).

S. Mittnik, S. T. Rachev, and L. Rueschendorf. Test of association between multivariate stable vectors, Distributional Modelling in Finance, Mathematical & Comp. Modelling 29, 181–195, (1999).

S. Mittnik, S. T. Rachev, T. Doganoglu, and D. Chenyao. Maximum likelihood estimation of stable Paretian models, Mathematical and Computer Modelling 29, 275–293, (1999).

L. B. Klebanov, S. T. Rachev, and G. J. Gzekely. Pre-limit theorems and their applications, Acta Applicandae Mathematicae 58, 159–174, (1999).

C. Marinelli, S. T. Rachev, R. Roll, and H. Göppl. Subordinated stock price models: Heavy tails and long-range dependence in the high-frequency Deutsche Bank price record, in Datamining and Computational Finance, pp. 69–94. Physica-Verlag, (1999).

S. T. Rachev, S. Mittnik, and J. R. Kim. Stable Paretian models in econometrics: Part I, Mathematical Scientist 24, 24–55, (1999).

S. T. Rachev, S. Mittnik, and J. R. Kim. Stable Paretian models in econometrics: Part II, Mathematical Scientist 24, 113–127, (1999).

1998

S. T. Rachev, S. Mittnik, and J. R. Kim. Chi-square-type distributions for heavy-tailed variates, Economic Theory 14, 339–354, (1998).

S. T. Rachev, S. Mittnik, and M. S. Paolella. A tail estimator for the index of the stable Paretian distribution, Communications in Statistics-Theory and Methods 27, 1239–1262, (1998).

S. T. Rachev and V. Paulauskas. Co integrated processes with infinite variance innovations, Annals of Applied Probability 8, 775–792, (1998).

S. T. Rachev, S. Mittnik, and M. S. Paolella. Stable Paretian modelling in finance: Some empirical and theoretical aspects, in A Practical Guide to Heavy Tails: Statistical Techniques and Applications, edited by R. Adler et al., pp. 79–110. Birhauser, (1998).

S. T. Rachev, S. Mittnik, and J. R. Kim. Time series with unit roots and infinite-variance disturbances, Appl. Math. Letters 11, 69–74, (1998).

SVETLOZAR (ZARI) TODOROV RACHEV

S. T. Rachev, S. Mittnik, and M. S. Paolella. Unconditional and conditional distributional models for the Nikkei Index, Asia-Pacific Financial Markets 5, 99–128, (1998).

1997

S. T. Rachev, S. H. Hurst, and E. Platen. Subordinated market index models: A comparison, Financial Engineering and the Japanese Markets 4, 97–124, (1997).

S. T. Rachev and M. Maejima. Rates-of-convergence in the multivariate max-stable limit theorem, Statistics and Probability Letters 32, 115–123, (1997).

S. T. Rachev and L. Klebanov. Computer tomography and quantum mechanics, Adv. Appl. Prob 29, 595–606, (1997).

S. T. Rachev, A. Yu. Yakovlov, L. G. Hanin, and A. D. Tsodikov. A stochastic model of carcinogenesis and tumour size and detection, Advances in Applied Probability 29, 607–628, (1997).

S. T. Rachev, A. Weron, and K. Weron. Conditionally exponential dependence model for asset returns, Appl Math. Letters 10, 5–9, (1997).

S. T. Rachev, J. R. Kim, and S. Mittnik. Econometric modelling in the presence of heavy- tailed innovations: A survey of some recent advances, Stochastic Models 13, 841–866, (1997).

S. T. Rachev, V. Haynatzka, and G. Haynatzki. Probability metrics and limit theorems in AIDS epidemiology, in Real and Stochastic Analysis-Recent Advances, edited by M. M. Rao, pp. 159–233. CRC Press, (1997).

S. T. Rachev and L. Klebanov. The method of moments in tomography and in quantum mechanics, in Distributions with Given Marginals and Moment Problems, edited by U. Benes and J. Stephan, pp. 35–52. Kluwer, (1997).

S. T. Rachev and M. Balinski. Rounding proportions: Method of Rounding, Math Scientist 22, 1–26, (1997).

S. T. Rachev. Book review: stochastic models of tumor latency and their biostatistical applications, Bulletin of Mathematical Biology 59, 404–406, (1997).

S. T. Rachev, S. Mittnik, and D. Chenyao. Distribution of exchange rates: A geometric summation-stable model, in Proceedings of the Seminar on Data Analysis, Sozopol, Bulgaria (Sept. 12–17, 1997).

1996

S. T. Rachev and S. Mittnik. Tail estimation of the stable index, Appl Math Letters 9, 53–56, (1996).

S. T. Rachev and M. Maejima. Rates of convergence in the operator-stable limit theorem, Journal of Theoretical Probability 9, 37–85, (1996).

S. T. Rachev, L. Klebanov, J. Melamed, and S. Mittnik. Integral and asymptotic representations of geo-stable densities, Appl Math Letters 9, 37–40, (1996).

S. T. Rachev, A. Yakovlev, L. Hanin, and A. Tsodikov. A distribution of tumor size at detection and its limiting form, Proc. Natl. Acad. Sci. USA 93, 6671–6675, (1996).

S. T. Rachev, J. R. Kim, and S. Mittnik. Detecting asymmetries in observed time series and disturbances, Studies in Nonlinear Dynamics and Econometrics 1, 131–138, (1996).

S. T. Rachev, E. Myasnikova, and A. Yakovlev. Queuing models of potentially lethal damage repair in irradiated cells, Mathematical Biosciences 135, 85–109, (1996).

S. T. Rachev and B. Gamrowski. Testing the validity of value-at-risk measures, in Applied Probability, edited by C. Heyde et al. pp. 307–320. Springer-Verlag, (1996).

S. T. Rachev and L. Klebanov. On a special case of the basic problem in diffraction tomography, Communications in Statistics: Stochastic Models 12 (2, (1996).

S. T. Rachev, J. A. Cuesta, C. Matran, and L. Rueschendorf. Mass transportation problems in probability theory, Mathematical Scientist 21, 34–72, (1996).

SVETLOZAR (ZARI) TODOROV RACHEV

S. T. Rachev, G. Chobanov, P. Mateev, and S. Mittnik. Modelling the distribution of highly volatile exchange-rate time series, in Time Series, edited by P. Robinson and M. Rosenblatt, pp. 130–144. Springer Verlag, (1996).

S. T. Rachev and M. Gelbrich. Discretization for stochastic differential equations, Waserstein LP metrics and econometrical models, Distributions with Fixed Marginals and Related Topics, IMS Lecture Notes-Monograph Series 28, 98–119, (1996).

S. T. Rachev and L. Klebanov. Proximity of probability measures with common marginals in a finite number of directions, Distributions with Fixed Marginals and Related Topics, IMS Lecture Notes-Monograph Series 28, 162–174, (1996).

S. T. Rachev and L. Klebanov. Sums of random number of random variables and their approximations with accompanying infinitely divisible laws, Serdica, Math Journal 22, 471–496, (1996).

1995

S. T. Rachev and B. Cheng. Multivariate stable futures prices, Mathematical Finance 5, 133–153, (1995).

S. T. Rachev, B. Cheng, and C. R. Heathcote. Testing multivariate symmetry, Journal of Multivariate Analysis 54, 91–112, (1995).

S. T. Rachev and G. Samorodnitsk. Limit laws for a stochastic process and random recursion arising in probabilistic modelling, Advances in Applied Probability 27, 185–202, (1995).

S. T. Rachev and L. Hanin. An extension of the Kantorovich-Rubinstein mass-transshipment problem, Numerical Functional. Analysis and Optimization 16, 701–735, (1995).

S. T. Rachev and S. Mittnik. Stable GARCH Models for financial time series, Appl. Math. Lett. 815, 33-37, (1995).

S. T. Rachev and R. Karandikar. A generalized binomial model and option formulae for subordinated stock-price processes, Probability and Mathematical Statistics 15, 427–447, (1995).

S. T. Rachev and L. Rueschendorf. Probability metrics and recursive algorithms, Journal of Applied Probability 27, 770–799, (1995).

S. T. Rachev, Chufang Wu, and A. Yu. Yakovlev. A bivariate limiting distribution of tumor latency time, Mathematical Biosciences 127, 127–147, (1995).

S. T. Rachev and L. Klebanov. The methods of moments in computer tomography, Math. Scientist 20, 1–14, (1995).

S. T. Rachev and B. Gamrowski. Financial models using stable laws, Probability Theory and its Application in Applied and Industrial Mathematics, edited by Yu. V. Prohorov, pp. 556–604, (1995).

1994

S. T. Rachev and L. Rueschendorf. On the Cox, Ross and Rubinstein model for option pricing, Theory of Probability. Appl. 39, 150–190, (1994).

S. T. Rachev and G. Samorodnitsk. Geometric stable distributions in Banach spaces, Journal of Theoretical Probability 7(2), 351–373, (1994).

S. T. Rachev and L. Rueschendorf. Propagation of chaos and contraction of stochastic mappings, Siberian Advances in Mathematics 4, 114–150, (1994).

S. T. Rachev and L. Rueschendorf. Solution of some transportation problems with relaxed or additional constraints, SIAM Journal on Control and Optimization 32 (3), (1994).

S. T. Rachev, L. Rueschendorf, and P. Feldmann. Limit theorems for recursive algorithms, Journal of Computational and Applied Mathematics 56, 169–182, (1994).

S. T. Rachev and L. G. Hanin Mass transshipment problems and ideal metrics, Journal of Computational and Applied Mathematics 56, 183–196, (1994).

S. T. Rachev and T. J. Kozubowski. The theory of geometric stable distributions and its use in modelling financial data, European Journal of Operations research: Financial Modelling 74, 310–324, (1994).

SVETLOZAR (ZARI) TODOROV RACHEV

S. T. Rachev and L. Rueschendorf. On the rate of convergence in the CLT with respect to the Kantorovich metric, Probability in Banach Spaces 9, edited by J. Hoffman-Jorgensen, J. Kuelbs, and M. B. Markus, pp. 193–207. Birkhäuser, (1994).

S. T. Rachev and B. Gamrowski. Stable models in testable asset returns, in Approximation, Probability and Related Fields, Plenum Press, 223–236, (1994).

S. T. Rachev, L. Klebanov, and J. A. Melamed. On the joint estimation of stable law parameter, in Approximation, Probability and Related Fields, Plenum Press, pp. 315–320, (1994).

S. T. Rachev, G. Anastassiou, and X. M. Yu. Multivariate probabilistic wavelet approximation, in Approximation, Probability and Related Fields, Plenum Press, p. 657, (1994).

1993

S. T. Rachev, M. L. T. Lee, and G. Samorodnitsky. Dependence of stable random variables, Stochastic Inequalities, IMS Lecture Notes-Monograph Series 22, 219–234, (1993).

S. T. Rachev, L. Hanin, and A. Yu. Yakovlev. On the optimal control of cancer radiotherapy for nonhomogeneous cell populations, Advances of Applied Probability 25, 1–23, (1993).

S. T. Rachev and A. Sengupta. Laplace-Weibull mixtures for modelling price changes, Management Science, 1029–1038, (1993).

S. T. Rachev, L. Klebanov, and A. Yu. Yakovlev. A stochastic model of radiation carcinogenesis: latent time distributions and their properties, Mathematical Biosciences 113, 51–75, (1993).

S. T. Rachev and M. Balinski. Rounding proportions: rules of rounding, Numerical Functional Analysis and Optimization 14, 475–501, (1993).

S. T. Rachev and R. Epstein-Feldmann. U-statistics of random-size samples and limit theorems for systems of Markovian particles with non-Poisson initial distributions, Analysis of Probability 21, 1927–1945, (1993).

S. T. Rachev and S. Mittnik. Modelling asset returns with alternative stable laws, Econometric Reviews 12, 261–330, (1993).

S. T. Rachev and S. Mittnik. Reply to comments on “Modelling asset returns with alternative stable laws”, Econometric Reviews 12, 347–389, (1993).

S. T. Rachev and H. Xin. Test on association of random variables in the domain of attraction of multivariate stable law, Probability and Mathematical Statistics 14 (1), 125–141, (1993).

S. T. Rachev and I. Olkin. Maximum submatrix traces for positive definite matrices, SIAM Journal of Matrix Analysis Applications 14, 390–397, (1993).

S. T. Rachev. Book Review of Stationary Stochastic Models, by A. Brandt, P. Franken and B. Lisek, John Wiley & Sons, 1990, p. 344. Metrika-International Journal for Theoretical and Applied Statistics 40, 130–132, (1993).

S. T. Rachev, M. Balinski, and B. Athanasopoulos. Some developments on the theory of rounding proportions, Bulletin of the ISI, 49th Session, Firenze I, 71–72, (1993).

S. T. Rachev and L. Rueschendorf. On constrained transportation problems, Proceedings of the 32nd Conference on Decision and Control, IEEE Control Systems Society 3, 2896–2900, (1993).

S. T. Rachev. Stable models for asset returns and option pricing, QUICK, ORI Report 8 (11), 24–26 (in Japanese), (1993).

S. T. Rachev. Rate of convergence of maxima of random arrays with applications to stock returns, Statistics & Decisions 11, 279–288, (1993).

S. T. Rachev, A. Yu. Yakovlev, and L. Klebanov. On the parametric estimation of survival functions, Statistics & Decisions Suppl. Issue, 3, 83–102, (1993).

S. T. Rachev and G. Samorodnitski. Option pricing formulae for speculative prices modelled by subordinated stochastic processes, PLISKA, Studia Mathematika Bulgarica 19, 175–190, (1993).

SVETLOZAR (ZARI) TODOROV RACHEV

S. T. Rachev and A. Yu. Yakovlev. Random minima scheme and carcinogenic risk estimation, Mathematical Scientist 18, 20–36, (1993).

1992

S. T. Rachev, L. Rueschendorf, and A. Schief. Uniformities for the convergence in law and in probability, Journal of Theoretical Probability 5, 33–44, (1992).

S. T. Rachev and L. Rueschendorf. A new ideal metric with applications to multivariate stable limit theorems, Probability Theory and Related Fields 94, 163–187, (1992).

S. T. Rachev and L. Rueschendorf. Rate of convergence for sums and maxima and doubly ideal metrics, Theory of Probability. Appl. 37 (2), 276–289, (1992).

S. T. Rachev and S. Schief. On Lp-minimal metric, Probability and Mathematical Statistics 13 (2), 311–320, (1992).

S. T. Rachev and A. Sengupta. Geometric stable distributions and Laplace-Weibull mixtures, Statistics and Decisions 10, 251–271, (1992)

S. T. Rachev and G. Anastassiou. Moment problems and their applications to characterization of stochastic processes, queuing theory and rounding problems, Proceedings of the 6th SEA meeting “Approximation Theory,” (Lecture Notes in Pure and Applied Mathematics) 138, 1–77, (1992).

S. T. Rachev and M. Taksar. Kantorovich’s functional in space of measures, Applied Stochastic Analysis, Proceedings of the US-French Workshop, Lecture Notes in Control and Information Science 177, 248–261,

S. T. Rachev and G. Anastassiou. Moment problems and their applications to the stability of queuing models, Computers and Mathematics with Applications 24 (8/9), 229–246, (1992).

S. T. Rachev, B. Dimitrov, and Z. Khalil. A probabilistic approach to optimal quality usage, Computers and Mathematics with Applications 24 (8/9), 219–227, (1992).

S. T. Rachev. Theory of probability metrics and recursive algorithms, in Distancia ‘92, Proceedings of Congress International sure Analyse en Distance, edited by S. Joly and G. Le Calve, pp. 339–403. Universite de Haute Bretagne, Rennes, (1992).

1991

S. T. Rachev and J. E. Yukich. Rates of convergence of alpha-stable random motions, Journal of Theoretical Probability. 4 (2), 333–352, (1991).

S. T. Rachev and L. Rueschendorf. Approximate independence of distributions on spheres and their stability properties, Analysis of Probability 19, 1311–1337, (1991).

S. T. Rachev and S. Resnick. Max-geometric infinite divisibility and stability, Stochastic Models 2, 191–218, (1991).

S. T. Rachev and E. Omey. Rates of convergence in multivariate extreme value theory, Journal of Multivariate Analysis 37, 36–50, (1991).

S. T. Rachev and L. Baxter. The stability of a characterization of the bivariate Marshall–Olkin distribution, Journal of Mathematical Analysis and Applications V 160, 563–571, (1991).

S. T. Rachev and L. Rueschendorf. Recent results in the theory of probability metrics, Statistics and Decisions 9, 327–373, (1991).

S. T. Rachev. Mass transshipment problems and ideal metrics, Numerical Function Analytics and Optimization, 12 (5 & 6), 563–573, (1991).

S. T. Rachev and S. Mittnik. Alternative multivariate stable distributions and their applications to financial modelling, Stable Processes and Related Topics. Proceedings of MSI Workshop, edited by S. Cambanis et al., Birkhauser, (1991).

S. T. Rachev. Optimal mass transshipment problems and ideal metrics, in Proceedings of XI Congreso de Metodologias en Ingenieria de Sistemas, Azocar, Santiago, Chile, pp. 115–120, (1991).

SVETLOZAR (ZARI) TODOROV RACHEV

1990

S. T. Rachev; and P. Todorovic. On the rate of convergence of some functionals of a stochastic process, J. Applied Probability. 28, 805–814, (1990).

S. T. Rachev and L. Rueschendorf. A counterexample to A.S. constructions, Statistics and Probability Letters 9, 307–309, (1990).

S. T. Rachev and L. Rueschendorf. Approximation of sums by compound Poisson distributions with respect to stop-loss distances, Advanced Applied Probability. 22, 350–374, (1990).

S. T. Rachev and L. Rueschendorf. A transformation property of minimal metrics, Theory Probability Applied 35, 131–137, (1990).

S. T. Rachev and R. M. Shortt. Duality theorems for Kantoroivich-Rubenstein and Wasserstein functionals, Dissertationes Mathematicae 299, (1990).

S. T. Rachev, G. Samorodnitsky, and M. T. Lee. Association of stable random variables, Annals of Probability 18 (4), 1759–1764, (1990).

1989

S. T. Rachev and V. Yukich. Rates for CLT via new ideal metrics, Analysis of Probability 17, 1989, 775–788, (1989).

S. T. Rachev and L. De Haan. Estimates of the rate of convergence for max-stable processes, Analysis of Probability 17, 651–677, (1989).

S. T. Rachev and R. M. Shortt. Classification problem for probability metrics, Contemporary Mathematics 94, 221–262, (1989).

S. T. Rachev and S. Mittnik. Stable distributions for asset returns, Appl. Math. Lett. 2 (3), 301–304, (1989).

S. T. Rachev. The problem of stability in queuing theory (Invited paper), Queuing Systems Theory and Applications 4, 287–318, (1989).

S. T. Rachev and J. Yukich. Smoothing metrics for measures on groups, Annales de l'Institut Henri Poincare 25, 429–441, (1989).

S. T. Rachev and I. Kuznezova-Sholpo. Explicit solutions of moment problems, Probability and Math. Statistics 10, 297–312, (1989).

S. T. Rachev, A. Yu. Yakovlev, and N. O. Kadyrova. Maximum likelihood estimation of the bimodal failure rate for censored and tied observations, Statistics 20, 135–140, (1989).

S. T. Rachev, N. O. Kadyrova, and A. Yakovlev. Isotonic maximum likelihood estimation of the bimodal failure rate - a computer-based study, Statistics 20, 271–278, (1989).

S. T. Rachev (with E. M. Myasnikova A. Yu. Yakovlev et al.). Analysis of the survival rate after the combined radiation effect. Synergism and antagonism of the effects of two factors, Radiology 4, 478–483 (in Russian), (1989).

S. T. Rachev and L. Rueschendorf. A characterization of random variables with minimum L2 –distance, J. Mult. Analysis 132, 48–54, (1989).

S. T. Rachev, L. G. Hanin, R. E. Goot, and A. Yu. Yakovlev. Precise upper bounds for the functionals describing tumour treatment efficiency, Lecture Notes in Math. 1412, 50–62, (1989).

S. T. Rachev, L. B. Klebanov, and J. A. Melamed. On the products of a random number of random variables in connection with a problem from mathematical economics, Lecture Notes in Math. 1412, 103–109, (1989).

S. T. Rachev and V. L. Levin. New duality theorems for marginal problems with some applications in stochastics, Lecture Notes in Math. 1412, 137–170, (1989).

S. T. Rachev and G. Anastassiou. Approximation of a random queue by means of deterministic queuing models, in Approximation Theory VI, edited by C. K. Chui, L. L. Schumaker and J. D. Ward, pp. 1–4. Academic Press, (1989).

S. T. Rachev, R. E. Good, A. Yu. Yakovlev, N. O. Kadyrova, and G. M. Zharinov. Some statistical test associated with the concept of delta-stochastic ordering of two random variables, Serdica 16, 240–245, (1989).

SVETLOZAR (ZARI) TODOROV RACHEV

1988
S. T. Rachev and E. Omey. Theor. Prob. Appl. 33, 560–565, (1988).

S. T. Rachev and A. Yu. Yakovlev. Theoretical bounds for the tumor treatment efficiency, System. Analytics Model Simulation. 5 (1), 37–42, (1988).

S. T. Rachev and A. Yu. Yakovlev. Bounds for crude survival probabilities within competing risks framework and statistical application, Statistics and Probability Letters, 389–394, (1988)
S. T. Rachev and A. Yu. Yakovlev. Bounds for the probabilistic characteristics of latent failure times within competing risks framework, Serdica 14, 325–332, (1988).

S. T. Rachev, A. Yu. Yakovlew, N. O. Kadyrova, and E. M. Nyasmikova. On the statistical inference from survival experiments with two types of failure, Biom J. 30 (7), 835–842, (1988).

S. T. Rachev and A. Yu. Yakovlev. Some problems of the competing risk theory, Proceedings of the Fifth International Summer School on Probability Theory and Mathematical Statistics, Varna, Publishing House of Bulgarian Academy of Sciences, 171–187, (1988).

S. T. Rachev. The stability of stochastic models (invited paper), Applied Probability Newsletter 12(2), 3–4, (1988).

S. T. Rachev and A. Yu. Yakovlev. Theoretical bounds for radiation therapy efficiency, Medical Radiology 5, 17–21 (in Russian), (1988).

S. T. Rachev, L. B. Klebanov, A. Yu. Yakovlev, and A. Yu. An estimate of the rate of convergence to the limit distribution for the minima scheme for random number of identically distributed random variables, Stability Problems for Stochastic Models, Proceedings, Moscow, VNIISI, 120–124 (in Russian), (1988).

1987
S. T. Rachev and J. Beirlant. The problems in stability in insurance mathematics, Insurance: Mathematics & Economics 6, 179–188, (1987).

S. T. Rachev and M. Maejima. An ideal metric and the rate of convergence to a self-similar process, Ann. Probability 15, 702–707, (1987).

S. T. Rachev. Probability metrics and their application to problems of stability of stochastic models, Proceedings of the 16th Spring Conference of the Union of Bulgarian Mathematicians, Sunny Beach, April 1987, 53–60, (1987).

S. T. Rachev and A. Obretanov. Estimates of the deviation between the exponential and new classes of bivariate distributions, Lect. Notes in Math. 1233, 93–102, (1987).

1986
S. T. Rachev and G. S. Chobanov. Metrization of the vague convergence, Pliska 2, 1154–1158 (in Russian), (1986).

S. T. Rachev and V. V. Kalashnikov. Characterization of inverse problems in queuing and their stability, J. Applied Probability 23, 459–473, (1986).

S. T. Rachev. Lévy-Prokhorov distance in a space of semi-continuous set function, Stability Problems for Stochastic Models, Proceedings, Moscow, VNIISI 1987, 76–88 (in Russian), English translation (1986), J. Soviet Math. 32 (1), 64–74, (1986).

S. T. Rachev and A. Obretanov. Stability of some characterization properties of the exponential distribution, Stability of the service process in a system of type M7M/1, Stability Problems for Stochastic Models, Proceedings, Moscow, VNIISI 1983, 79–87 (in Russian); English translation (1986), J. Soviet Math. 32 (6), 643–651, (1986).

S. T. Rachev, A. Obretanov, and B. Dimitrov. Stability of the service process in a system of type M7M/1, Stability Problems for Stochastic Models, Proceedings, Moscow, VNIISI 1983, 71–79 (in Russian); English translation, J. Soviet Math. 32 (6), 634–643, (1986).
S. T. Rachev and Zw. Ignatov. Ideal quadratic metrics, Stability Problems for Stochastic Models, Proceedings, Moscow, VNIISI 1984, 119–128 (in Russian); English translation (1986), J. Soviet Math. 35 (2), 2376–2394, (1986).

S. T. Rachev and V. Kalashnikov (1986) Characterization problems in queuing and their stability, Stability Problems for Stochastic Models, Proceedings, Moscow, VNIISI 1984, 49–86 (in Russian); English translation (1986), J. Soviet Math. 35 (2), 2336–2360, (1986).

SVETLOZAR (ZARI) TODOROV RACHEV

1985

S. T. Rachev and V. V. Kalashnikov. Characterization problems in queuing and their stability, Advanced Applied Probability 17, 320–348, (1985).

S. T. Rachev. Uniformity in weak and vague convergences, Teor. Verojatnost i Primen. 30 (3), 538–541 (in Russian), (1985).

S. T. Rachev. Probability Metrics and Their Applications to the Problems of Stability for Stochastic Models, Author-summary on the Doctor of Science Dissertation, Moscow, Steklov Mathematical Institute, (1985).

S. T. Rachev, B. N. Dimitrov, and Y. Yu. Yakovlev. Maximum likelihood estimation of the mortality rate function, Biom. J. 27, 317–326, (1985).

S. T. Rachev and V. V. Kalashnikov. Stability in the mean of the characterization of queuing models, Stability Problems for Stochastic Models, Proceedings, Moscow, VNIISI 1985, 67–75 (in Russian); English translation (1988), J. Soviet Math. 40 (4), 502–509, (1985).

S. T. Rachev. Extreme functionals in the space of probability measures, Lecture Notes in Math. 1155, 320–348, (1985).

S. T. Rachev and L. B. Klebenov. Stability of lack of memory property of multivariate exponential distributions in finite number of points, Lect. Notes Math. 1155, 131–143, (1985).

S. T. Rachev and V. M. Zolotarev. Rate of convergence in limit theorems for the Max-scheme, Lecture Notes Math. 1155, 415–442, (1985).

S. T. Rachev and A. Obretenov. Bounds of deviation from exponentiality of distribution function classes, Proceedings of the 14th Spring Conference of the Union of Bulgarian Mathematicians, Sunny Beach, April 1985, 495–501, (1985).

S. T. Rachev. On a class of functionals in a space of probability measure, Teor. Verojatnot. i Primen. 29 (1), 41–48 (in Russian); English translation (1985), Theoriical Probability Appl. 29 (1), 41–49, (1985).

S. T. Rachev. The Monge-Kantorovich mass transference problem and its stochastic applications (invited paper), Teor. Verojatnot. i Primen. 29 (4), 625–653 (in Russian); English translation (1985), Theoritcal Probability Appl. 29 (4), 647–676, (1985).

1984

S. T. Rachev. On a problem of Dudley. Dokl. Akad. Nauk. 275 (I), 28–31 (in Russian), English translation (1984), Soviet Math. Dokl. 29 (2), 162–164, (1984).

S. T. Rachev. On the structure of the average and uniform distances. Dokl. Akad. Nauk 278 (2), 1984, 282–285 (in Russian); English translation (1984), Soviet Math. Dokl. 30 (2), 369–372, (1984).

S. T. Rachev. Hausdorff metric construction in the probability measures space, Pliska 7, 152–162, (1984).

1983

S. T. Rachev and Zw. Ignatov. Minimality of ideal probabilistic metrics, Stability Problems for Stochastic Models, Proceedings, Moscow, VNIISI 1983, 36–48 (in Russian); English translation (1986), J. Soviet Math. 32 (6), 595–608, (1983).

S. T. Rachev. Minimal metrics in the real valued random variables space. Lect. Notes Math. 982, 172–180, (1983).

S. T. Rachev and G. Chobanov. Existences and uniqueness of the limit Gibbs' distribution, Lectures on Stochastic Problems of the Modern Physics, Sofia, University. Sofia, 1983, 42–60, (1983).

S. T. Rachev and A. Obretanov. Characterization of the bivariate exponential distribution and Marshall-Olkin distribution and stability, Lecture Notes Math. 982, 136–150, (1983).

S. T. Rachev and D. Vandev. Compactness in the probability measures space, Proceedings of the Third European Young Statisticians Meeting, edited by M. Galyare et al., pp. 138–152. Katholieke University, (1983).

SVETLOZAR (ZARI) TODOROV RACHEV

1982
S. T. Rachev. Minimal metrics, Pub. Inst. Statistics. University Paris XXVII (I), 22–47, (1982).

S. T. Rachev. Minimal metrics in the random variables space, in Probability and Statistical Inference, Proceedings of the 2nd Pannonian Symp., edited by M. Grossmann et al., pp. 318–327. D. Reidel, (1982).

S. T. Rachev, D. Vandev, and C. Ignatov. Metrics that are invariant relative to monotone transformations, Stability Problems for Stochastic Models Proceedings Moscow, VNIISI 1982, 25–36 (in Russian); English translation (1986), J. Soviet Math 35 (3), 2466–2478, (1982).

(NR) S. T. Rachev, A. Obretanov, and B. Dimitrov. Stability of an exponential law characterization, Stability Problems for Stochastic Models, Moscow, VNIISI 1982, 39–46, (1982).

1981
S. T. Rachev. On minimal metrics in a space of real valued random variables, Dokl. Akad. Nauk USSR 257 (5), 2067–2070 (in Russian); English translation (1981), Soviet Math. Dokl. 23 (2), 1981, 425–428, (1981).
S. T. Rachev. Minimal metrics in a space of random vectors with fixed one-dimensional marginal distributions, Stability Problems for Stochastic Models, Proceedings Moscow, VNIISI 1981, 112–128 (in Russian); English translation (1986), J. Soviet Math. 34 (2), 1543–1555, (1981).

S.T. Rachev and Zv. Ignatov. Stochastic inequalities for p-functions, Dokl. Bulgarian Acad. Sci 35 (5), 613–616, (1981).

1979
S. T. Rachev. Hausdorff metric structures of the space of probability measures, Zap. Nauchn. Sem. Leningrad Atdel Mat. Inst. Stelkov (LOMI) 87, 87–103 (in Russian); English translation (1981), J. Soviet Math. 17, 2218–2232, (1979).

1978
S. T. Rachev. Maximum likelihood estimation of U-type failure rate function, Ann. Univ. Sofia, Fac. Math. Mec. 72, 127–140, (1978).

S. T. Rachev. Theorems of moments and their applications for NBU distributions, Mathematics and Mathematical Education, Proc. of Fourth Spring Conference of Bulgarian Mathematical Society, Pernik (April 2–4, 1975), 303–310 (in Russian), (1978).

1977
S. T. Rachev. Reliability of aging system, Ann. University Sofia, Fac. Math. Mec. 68 (1973/74), 339–347 (in Russian), (1977).