Viktor Todorov

Contact Information

Finance Department
Kellogg School of Management
Northwestern University
Evanston, IL 60208-2001

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Education

Duke University, Durham, North Carolina, USA

Ph.D. in Economics, May 2007

- PhD Thesis: "Jump Processes in Finance: Modeling, Simulation, Inference and Pricing"
- Advisors: George Tauchen (chair), Tim Bollerslev, Ron Gallant, Han Hong

Central European University, Budapest, Hungary

M.A. in Economics, June 2002

Varna University of Economics, Varna, Bulgaria

B.A. in Finance, June 1999

Research Interests

Asset Pricing, Derivatives, Theoretical and Applied Econometrics, Applied Probability

Academic Appointments

Associate Professor of Finance, **Kellogg School of Management, Northwestern University, 2011 - present**

Assistant Professor of Finance , **Kellogg School of Management, Northwestern University, 2007-2011**

Publications

Todorov, V. and G. Tauchen, "Inverse Realized Laplace Transforms for Nonparametric Volatility Density Estimation in Jump-Diffusions", accepted for publication in *Journal of the American Statistical Association.*

Todorov, V. and G. Tauchen, "The Realized Laplace Transform of Volatility", accepted for publication in *Econometrica.*

Bollerslev, T., V. Todorov and S. Zhengzi Li, "Jump Tails, Extreme Dependencies and the Distribution of Stock Returns", accepted for publication in *Journal of Econometrics.*

Bollerslev, T. and V. Todorov, "Estimation of Jump Tails", *Econometrica*, 2011, 79, pp 1727-1783.

Bollerslev, T. and V. Todorov, "Tails, Fears and Risk Premia", *Journal of Finance*, 2011, 66, pp 2165-2211.

Todorov, V., G. Tauchen and I. Grynkiv, "Realized Laplace Transforms for Estimation of Jump Diffusive Volatility Models", *Journal of Econometrics*, 2011, 164, pp 367-381.

Todorov, V. and G. Tauchen, "Volatility Jumps", *Journal of Business and Economic Statistics*, 2011, 29(3), pp 356-371.

Todorov, V. and G. Tauchen, “Limit Theorems for Power Variations of Pure-Jump Processes with Application to Activity Estimation”, *Annals of Applied Probability*, 2011, 21(2), pp 546-588.

Todorov, V., “Econometric Analysis of Jump-Driven Stochastic Volatility Models”, *Journal of Econometrics*, 2011, 160, pp 12-21.

Andersen, T. and V. Todorov, “Realized Volatility and Multipower Variation”, *Encyclopedia of Quantitative Finance*, 2010, Ole Barndorff-Nielsen and Eric Renault (eds).

Jacod, J. and V. Todorov, “Do Price and Volatility Jump Together?”, *Annals of Applied Probability*, 2010, 20(4), pp 1425-1469.

Todorov, V. and T. Bollerslev, “Jumps and Betas: A New Theoretical Framework for Disentangling and Estimating Systematic Risks”, *Journal of Econometrics*, 2010, 157, pp 220-235.

Todorov, V., “Variance Risk Premium Dynamics: The Role of Jumps”, *The Review of Financial Studies*, 2010, 23(1), pp 345-383.

Todorov, V. and G. Tauchen, “Activity Signature Functions for High-Frequency Data Analysis”, *Journal of Econometrics*, 2010, 154, pp 125-138.

Jacod, J. and V. Todorov, “ Testing for Common Arrivals of Jumps for Discretely Observed Multidimensional Processes”, *Annals of Statistics*, 2009, 37, pp 1792-1838.

Todorov, V., “Estimation of Continuous-Time Stochastic Volatility Models with Jumps using High-Frequency Data”, *Journal of Econometrics*, 2009, 148, pp 131-148.

Todorov, V. and G.Tauchen, “Simulation Methods for Levy-Driven CARMA Stochastic Volatility Models”, *Journal of Business and Economic Statistics*, 2006, 24(4), pp 455-469.

Working Papers

Andersen, T. G., N. Fusari and V. Todorov, “Parametric Inference, Testing and Dynamic State Recovery from Option Panels with Fixed Time Span”, February 2012.

Diop, A., J. Jacod and V. Todorov, “Central Limit Theorem for Approximate Quadratic Variations of Pure Jump Ito Semimartingales”, January 2012.

Todorov, V. and G. Tauchen, “Realized Laplace Transforms for Pure-Jump Semimartingales”, November 2011.

Todorov, V., G. Tauchen and I. Grynkiv, “Volatility Activity: Specification and Estimation”, May 2011.

Honors and Awards

2012 Chicago Mercantile Exchange Research Grant

2010-2013 NSF Grant: “Estimation of Jump-Tails: Theory and Applications”, with Tim Bollerslev.

2008 Arnold Zellner Thesis Award for Best Thesis in Business and Economic Statistics, American Statistical Association.

Professional Service

Memberships:

Econometric Society, Western Finance Association

Journal referee:

Annals of Applied Probability, Annals of Statistics, Bernoulli Journal, Econometrica, Econometric Theory, International Journal of Forecasting, Journal of the American Statistical Association, Journal of Applied Econometrics, Journal of Applied Probability, Journal of Business and Economic Statistics, Journal of Econometrics, Journal of Economic Dynamics and Control, Journal of Empirical Finance, Journal of Finance, Journal of Financial Econometrics, Journal of Financial Economics, Management Science, Mathematical and Computer Modelling, Mathematical Finance, Mathematics and Financial Economics, NSF Grant Proposal Review, Review of Economics and Statistics, Review of Economic Studies, Review of Financial Studies, Southern Economics Journal, Statistics and Computing, Quarterly Journal of Economics

Program Committee: 2010 Conference of the Society for the Financial Econometrics (SoFiE)

Seminars and Conference Presentations

2012: Econometric Society meetings, Chicago; University of Lausanne, Switzerland (finance seminar); Oberwolfach Workshop on The Mathematics and Statistics of Quantitative Risk Management, Oberwolfach, Germany; Duke University; Triangle Econometrics Seminar; 3rd Annual Applied Financial Time Series Workshop, HEC Montreal; University of Chicago (financial mathematics seminar);

2011: Econometric Society meetings, Denver, Colorado (presentation+discussion); SoFiE Annual Conference, Chicago; Economic Analysis of High-Frequency Data and the Impact of Economic News, Stanford Institute for Theoretical Economics; University of Pennsylvania (econometrics seminar);

2010: The interplay between Financial and Insurance Mathematics, Statistics and Econometrics, Wolfgang Pauli Institute, Vienna University, Austria; Duke University, Financial Econometrics; IIT, Applied Mathematics; Federal Reserve Board, Washington DC; 12-th Annual Financial Econometrics Conference, University of Waterloo, Canada; Workshop on Financial Econometrics, Fields Institute, Canada; Warwick Business School Conference on Derivatives, Volatility and Correlation, England; Chicago GSB; WFA meetings, Victoria, Canada; European Statistical Meetings, Athens, Greece; NSF-NBER Time Series Conference, Duke University; SIAM Conference on Financial Mathematics and Engineering, San Francisco; Warwick Business School, England; University of Brussels, Belgium;

2009: UIC, Finance; Northwestern, Statistics; CIRANO-CIREQ Financial Econometrics Conference, Montreal (discussant); Stevanovich-CREATES Financial Econometrics Conference, Skagen, Denmark; SoFiE Annual Conference, Geneva, Switzerland; WFA meetings, San Diego (discussant); Economic Analysis of High-Frequency Data and the Impact of Economic News, Stanford Institute for Theoretical Economics; Joint Statistical Meetings, Washington DC; Oberwolfach Workshop on Challenges in Statistical Theory, Oberwolfach, Germany; Princeton Financial Econometrics Conference, Princeton University; Stevanovich-SoFiE conference on liquidity, credit risk and extreme events, Chicago;

2008: Triangle Econometrics Conference, North Carolina; Quantitative Economics Seminar, Queen's University, Canada; Vast Data and Financial Econometrics Conference, University of Oxford; NSF-NBER Time Series Conference, Aarhus, Denmark; Purdue University Financial Mathematics Seminar; University of Chicago Finance and Statistics Workshop; Financial Econometrics Conference, Imperial College London; Volatility Symposium, CREATES Denmark;

2007: NSF-NBER Time Series Conference, Iowa; Economic Analysis of High-Frequency Data and the Impact of Economic News, Stanford Institute for Theoretical Economics; Oberwolfach Workshop on Levy Processes and Related Topics, Oberwolfach, Germany; Board of Governors; Carnegie-Mellon; Chicago GSB; Cornel; LSE-Finance; Northwestern-Kellogg; NYU-Stern; Princeton; Stanford GSB;

2006: Conference in Honor of Ole Barndorff-Nielsen, Guanajuato, Mexico; Conference on Realized Volatility, Montreal;

2005: Conference on International Finance, Copenhagen, Denmark; Levy Processes SAMSI working group, Durham;

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