

Torben Gustav Andersen

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 Kellogg School of Management
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Personal Information

Marital status: Married; three children.
 Citizenship: Denmark; U.S. Permanent Resident.

Education

Ph. D. in Economics, **Yale University**, New Haven, 1992.
Master's Degree, Science, Economics and Mathematics (Cand Scient Oecon).
University of Aarhus, Denmark, 1985.

Academic Positions and Titles:

2024-2027 Incoming **President**, *Society for Financial Econometrics*, to serve 2025-2027.
 2024-: International Fellow, *Center for Research in Energy (CoRE)*; Aarhus, Denmark.
 2022-present Distinguished Fellow, *International Engineering and Technology Institute*
 2021-present Fellow, *Journal of Econometrics*
 2020-present Fellow, *International Association for Applied Econometrics*
 2020-present Unpaid Consultant, *Commodity Futures Trading Commission, CFTC*.
 2018-present: Fellow of the *Society for Economic Measurement, SEM*.
 2015-2017 **Chair**, Department of Finance, Kellogg School of Management, Northwestern University.
 2013-present: Fellow of the *Society for Financial Econometrics, SoFiE*.
 2011-2017 Board Member, *Foundation for Advancement of Research in Financial Economics*
 2008-present: Fellow of the *Econometric Society*.
 2008-2013: Faculty Fellow, *Zell Center for Risk Research*; Kellogg School of Management.
 2008-present: Research Affiliate of *The Volatility Institute*, Stern School of Business, New York University.
 2007-2022: International Fellow, *Center for Research in Econometric Analysis of Economic Time Series (CREATES)*; Aarhus, Denmark.
 2006-2012: Director, *International Business & Markets Program*; Kellogg School of Management.
 2000-present: Research Associate, *National Bureau of Economic Research (NBER)*; Cambridge, MA.
 2000-present: *Nathan S. and Mary P. Sharp Distinguished Professor of Finance*, Department of Finance, Kellogg School of Management, Northwestern University.
 1997-2000: Associate Professor, Dept. of Finance, Kellogg School; Northwestern University.
 1991-1997: Assistant Professor, Dept. of Finance, Kellogg School; Northwestern University.

Fields of Interest:

Financial Econometrics, Asset Pricing, Return Volatility Modeling,
 Time Series Econometrics, International Finance

Fellowships, Honors and Awards:

Grant Recipient, “*VIX Maturity Interpolation*,” Options Institute, Cboe Global Markets; February 2023.
Certificate for Top Cited Paper; *Quantitative Economics*; January 1, 2021 – December 15, 2022.
Bates-White Prize for Best Paper; SoFiE Annual Meeting, Cambridge, U.K., June 2022.
Distinguished Fellow, *International Engineering and Technology Institute*; 2022-present
Fellow, *Journal of Econometrics*; 2021-present
Fellow of the *International Association for Applied Econometrics*, 2020-present
Econometric Theory (ET) Lecture delivered in Osaka, Japan; June 2019.
Fellow of the *Society for Economic Measurement*, 2018-present
National Science Foundation Research Grants, **2015-2017**; 2006-2008; 1998-2005.
Listed on “Highly Cited Scholars” Ranking, Business and Economics, Thomson-Reuters **2015**, 2014
Finalist, AQR Insight Award, 2014.
Rigmor and Carl Holst-Knudsen Science Prize 2013, University of Aarhus, Denmark
CME Foundation Research Grant, 2013.
Fellow of the *Econometric Society*, 2008-present
Fellow of the *Society for Financial Econometrics*, 2011-present
Certificate of Appreciation for Editorship, *Journal of Business & Economic Statistics*, ASA, 2006.
Morgan Stanley Market Microstructure Research Grant, 2003.
BSI Gamma Foundation Grant, 2002-2003.
Best Paper Award, *Multinational Finance Journal*, 2000.
Institute for Quantitative Research in Finance (Q-Group) Fellowship, 1996;
Merrill-Lynch Research Fellowship, 1993; 1995;
Research Fellowship, Kellogg, Northwestern University, 1991-92, 1994
NATO Science Fellowship, 1990
Alfred P. Sloan Dissertation Fellowship, 1989

Co-Editor: *Journal of Econometrics* (July 2019 – March 2023)

Editor-in-Chief: *Journal of Business & Economic Statistics* (January 2004 – December 2006)

Co-Editor: *Journal of Financial Econometrics* (2009 – 2014)

Editorial Boards:

Springer Series in Operations Research and Financial Engineering (Advisory Board; June 2006-)
Review of Financial Studies (July 2002 – July 2005)
Journal of Financial Econometrics (April 2001 – June 2009)
Econometric Theory (January 2002 – December 2003)
Journal of Finance (March 2000 – October 2003)
Journal of Empirical Finance (May 1998 - November 2001)
Journal of Business & Economic Statistics (March 1998 – December 2003)
Management Science (December 1997 - December 2000)

Program Committee:

Co-Chair, SoFiE Summer School; Kellogg, Northwestern University, 2017, 2019, 2021, 2024.
Co-Chair, Program Committee, NBER-NSF Time Series Conference; Kellogg, 2017.
Program Chair, SoFiE Eighth Annual Meeting, Aarhus University, Denmark; June 2015.
Society for Financial Econometrics, 2009, and each year 2011-2022.
Program Chair, SoFiE Sixteenth Annual Meeting, Rio de Janeiro, Brazil; June 2024.
Econometric Society Meeting, Montréal, Canada, 1998; New Orleans, 2008.
European Finance Association Meeting, Fontainebleau, France, 1998; Helsinki, Finland, 1999;
Copenhagen, Denmark, 2012; Cambridge, U.K., 2013.
Western Finance Association Meeting, Sun Valley, 2000; Tucson, 2001; Park City, 2002;
Cabo Real, Mexico, 2003; Vancouver, Canada, 2004;
American Finance Association Meeting, Washington, D.C., 2003.

Teaching:

Introductory Finance, International Finance (MBA, Undergraduate level)
Empirical Finance, Advanced Derivatives, High-Frequency Asset Pricing (Ph.D. level)

Consulting:

Federal Reserve Board of Governors; regional Federal Reserve Banks
Chicago-based Financial Market Trading Companies; Hedge Funds;
International Academic Institutions; Financial Litigation Cases

Articles and Books:

“Intraday Periodic Volatility Curves,” with Tao Su, Viktor Todorov and Zhiyuan Zheng; *Journal of the American Statistical Association*; **forthcoming**

“Editorial: Predictive Modeling of Financial Data,” with Robert Taylor, Allan Timmermann, and Dacheng Xiu; *Journal of Econometrics*, 237, Issue 2, Part C, 105496; **2023**.

“Volatility Measurement with Pockets of Extreme Return Persistence,” with Yingying Li, Viktor Todorov and Bo Zhou; *Journal of Econometrics*, 237, Issue 2, Part C, 105048; **2023**.

“Intraday Cross-Sectional Distributions of Systematic Risk,” with Raul Riva, Martin Thyrgaard and Viktor Todorov; *Journal of Econometrics*, 235, 1394-1418; **2023**.

“Testing for Parameter Instability and Structural Change in Persistent Predictive Regressions,” with Rasmus Varneskov; *Journal of Econometrics* 231, 361-386; **2022**.

“Consistent Local Spectrum (LCM) Inference for Predictive Return Regressions,” with Rasmus T. Varneskov; *Econometric Theory* 38, 1253-1307; **2022**

“Local Mispricing and Market Microstructure Noise: A Parametric Perspective,” with Ilya Archakov, Gökhan Cebiroglu and Nikolaus Hautsch; *Journal of Econometrics*. 230, 510-534; **2022**.

“Overview: Time Series Analysis of Higher Moments and Distributions of Financial Data,” with Chia-Lin Chang and Shiqing Ling; *Journal of Econometrics* 227, 1-3; **2022**.

“Recalcitrant Betas: Intraday Variation in the Cross-Sectional Dispersion of Systematic Risk,” with Martin Thyrgaard and Viktor Todorov; *Quantitative Economics* 12, 647-682; **2021**.

“Spatial Dependence in Option Observation Errors,” with Nicola Fusari, Viktor Todorov and Rasmus Varneskov; **ET Lecture 2019**, Osaka, Japan; *Econometric Theory* 37, 205-247; **2021 (Lead Article)**.

“Consistent Inference for Predictive Regressions in Persistent Economic Systems,” with Rasmus Varneskov; *Journal of Econometrics* 224, 215-244; **2021**

“Tail Risk and Return Predictability for the Japanese Equity Market,” with Viktor Todorov and Masato Ubukata; *Journal of Econometrics* 222, 344-363; **2021**.

“A Descriptive Study of High-Frequency Trade and Quote Option Data,” with Ilya Archakov, Leon Grund, Nikolaus Hautsch, Yifan Li, Sergei Nasakin, Ingmar Nolte, Manh Cuong Pham, Stephen Taylor and Viktor Todorov, *Journal of Financial Econometrics* 19, 128–177, **2021**.

“The Pricing of Tail Risk and the Equity Premium: Evidence from International Option Markets,” with Nicola Fusari, and Viktor Todorov; *Journal of Business & Economic Statistics* 38, 662-678; **2020**.

- “Time-Varying Periodicity in Intraday Volatility,” with Martin Thyrsgaard and Viktor Todorov; *Journal of the American Statistical Association* 114, 1695-1707; **2019**.
- “Inference for Option Panels in Pure Jump Settings,” with Nicola Fusari, Viktor Todorov and Rasmus Varneskov; *Econometric Theory* 35, 901-942; **2019**.
- “Unified Inference for Nonlinear Factor Models from Panels with Fixed and Long Time Span,” with Nicola Fusari, Viktor Todorov and Rasmus Varneskov; *Journal of Econometrics* 212, 4-25; **2019**.
- “Introduction,” with Tim Bollerslev; T.G. Andersen and T. Bollerslev (eds.): *Volatility, Volume I*, Edward Elgar Publishing; THE INTERNATIONAL LIBRARY OF CRITICAL WRITINGS IN ECONOMICS; Cheltenham, United Kingdom; Northampton, MA, United States; pages xiii-xli; **2018**.
- “*Volatility, Volume I and II*,” Torben G. Andersen and Tim Bollerslev (eds.); THE INTERNATIONAL LIBRARY OF CRITICAL WRITINGS IN ECONOMICS; Edward Elgar Publishing; Cheltenham, United Kingdom; Northampton, MA, United States; **2018**.
- “Short-Term Market Risks Implied by Weekly Options,” with Nicola Fusari and Viktor Todorov, *Journal of Finance* 72, 1335-1386, **2017**.
- “Assessing Measures of Toxic Order Flow and Early Warning Signals for Market Turbulence,” with Oleg Bondarenko; *Review of Finance* 19, 1-54; **2015 (Lead Article)**.
- “The Risk Premia Embedded in Index Options,” with Nicola Fusari and Viktor Todorov; *Journal of Financial Economics* 117, 558-584; **2015**.
- “Parametric Inference and Dynamic State Recovery from Option Panels,” with Nicola Fusari and Viktor Todorov; *Econometrica* 83, 1081-1145; **2015**.
- “Exploring Return Dynamics via Corridor Implied Volatility,” with Oleg Bondarenko and Maria Gonzalez-Perez; *Review of Financial Studies* 28, 2902-2945; **2015**.
- “The Fine Structure of Equity-Index Option Dynamics,” with Oleg Bondarenko, Viktor Todorov and George Tauchen; *Journal of Econometrics* 187, 532-546; **2015**.
- “A Robust Neighborhood Truncation Approach to Estimation of Integrated Quarticity,” with Dobrislav Dobrev and Ernst Schaumburg; *Econometric Theory* 30, 3-59; **2014**.
- “VPIN and the Flash Crash,” with Oleg Bondarenko; *Journal of Financial Markets* 17, 1-46; **2014**.
- “Reflecting on the VPIN Dispute,” with O. Bondarenko; *Journal of Financial Markets* 17, 53-64; **2014**.
- “Financial Risk Measurement for Financial Risk Management,” with Tim Bollerslev, Peter Christoffersen and Francis X. Diebold; G.Constantinides, M. Harris and R. Stulz (eds.): *Handbook of the Economics of Finance*; Elsevier, North Holland; Chapter 17, 1127-1220; **2013**.
- “Robust Volatility Estimation using Nearest-Neighbor Truncation,” with Dobrislav Dobrev and Ernst Schaumburg; *Journal of Econometrics* 169, 75-93; **2012**.
- “Realized Volatility Forecasting and Market Microstructure Noise,” with Tim Bollerslev and Nour Meddahi; *Journal of Econometrics* 160, 220-234; **2011**.
- “A Reduced Form Framework for Modeling Volatility of Speculative Prices Based on Realized Variation Measures,” with Tim Bollerslev and Xin Huang; *Journal of Econometrics*, 160, 176-189; **2011**.
- “Do Bonds Span Volatility Risk in the U.S. Treasury Market? A Specification Test for Affine Term Structure Models,” with Luca Benzoni; *Journal of Finance* 65, 603-653; **2010**.

“Continuous-Time Models, Realized Volatilities and Testable Distributional Implications for Daily Stock Returns,” with Tim Bollerslev, Per Frederiksen and Morten Nielsen; *Journal of Applied Econometrics* .25, 233-261; **2010**.

“Parametric and Nonparametric Measurements of Volatility,” with Tim Bollerslev and Francis X. Diebold; Y. Ait-Sahalia and L.P. Hansen (eds.): *Handbook of Financial Econometrics*, Volume 1 – Tools and Techniques; North Holland; 67-137; **2010**.

“Stochastic Volatility,” with Luca Benzoni; in Bob Meyers (ed.): *Complex Systems in Finance and Econometrics*, Springer Verlag, 694-726; **2009**.

Handbook of Financial Time Series, Co-Editor with Richard A. Davis, Jens-Peter Kreiss and Thomas Mikosch; Springer Verlag; **2009**.

“Introduction,” with R.A. Davis, J.-P. Kreiss and T. Mikosch; in T.G. Andersen, R.A. Davis, J.-P. Kreiss and T. Mikosch (eds.): *Handbook of Financial Time Series*, Springer Verlag, 1-13; **2009**.

“Stochastic Volatility: Origins and Overview,” with Neil Shephard; in T.G. Andersen, R.A. Davis, J.-P. Kreiss and T. Mikosch (eds.): *Handbook of Financial Time Series*, Springer Verlag, 233-254; **2009**.

“Realized Volatility,” with Luca Benzoni; in Torben G. Andersen, Richard Davis, Jens-Peter Kreiss and Thomas Mikosch (eds.): *Handbook of Financial Time Series*, Springer Verlag, 555-575; **2009**.

“Stochastic Volatility,” with Luca Benzoni; **forthcoming** in Bob Meyers (ed.) and Bruce Mizrach (section ed.): *Encyclopedia of Complexity and Systems Science*, Springer Verlag; Part 19, 8783-8815; **2009**

“Realized Volatility and Multipower Variation,” with Viktor Todorov; in Rama Cont (ed.) and Ole Barndorff-Nielsen and Eric Renault (section eds.): *Encyclopedia of Quantitative Finance*, Wiley.

“Volatility Modeling,” in Brian Everitt and Ed Melnick (eds.): *Encyclopedia of Quantitative Risk Assessment*; Volume 4, Wiley; September **2008**.

“Realized Volatility,” in Steven Durlauf and Lawrence Blume (eds.): *New Palgrave, 2nd Edition*, New Palgrave-MacMillan; June **2008**.

“Construction and Interpretation of Model-Free Implied Volatility,” with Oleg Bondarenko; in Israel Nelken (ed.): *Volatility as an Asset Class*, pp. 141-181; Risk Books, London; **2007**.

“Real-Time Price Discovery in Global Stock, Bond and Foreign Exchange Markets,” with Tim Bollerslev, Francis X. Diebold and Clara Vega. *Journal of International Economics* 73, 251-277; **2007**.

”Roughing It Up: Including Jump Components in Measuring, Modeling, and Forecasting of Asset Return Volatility,” with Tim Bollerslev, Francis X. Diebold; *Review of Economics and Statistics* 89, 701-720; **2007**. **Reprinted** 2018 in *Volatility, Volume II*, Eds.: T.G. Andersen and T. Bollerslev; International Library of Critical Writings in Economics; Chapter 23, 635-654; Edward Elgar Ltd., Cheltenham Glos, U.K.

“No-Arbitrage Semi-Martingale Restrictions for Continuous-Time Volatility Models subject to Leverage Effects, Jumps and i.i.d. Noise: Theory and Testable Distributional Assumptions,” with Tim Bollerslev and Dobrislav Dobrev; *Journal of Econometrics*; 138; 125-180; **2007**.

“Comment on “Realized Variance and Market Microstructure Noise,” by Peter R. Hansen and Asger Lunde,” with Tim Bollerslev, Per H. Frederiksen and Morten Ø. Nielsen; *Journal of Business and Economic Statistics* 24; 173-179; **2006**.

“Volatility and Correlation Forecasting,” with Tim Bollerslev, Peter Christoffersen and Francis X. Diebold; Graham Elliott, Clive W. J. Granger and Allan Timmermann (eds.): *Handbook of Economic Forecasting*, Chapter 15, pp. 777-878; North Holland; **2006**.

"Practical Volatility and Correlation Modeling for Financial Market Risk Management," with Tim Bollerslev, Peter Christoffersen and Francis X. Diebold; in M. Carey and R.M. Stulz (eds.): *The Risks of Financial Institutions*, pp. 512-548 (with discussion), *NBER*, University of Chicago Press; **2006**.

"A Framework for Exploring the Macroeconomic Determinants of Systematic Risk," with Tim Bollerslev, Francis X. Diebold, and Jin (Ginger) Wu; *American Economic Review* 95, 398-404; **2005**.

"Realized Beta: Persistence and Predictability," with Tim Bollerslev, Francis X. Diebold and Jin Wu; in Thomas Fomby (ed.): *Advances in Econometrics: Econometric Analysis of Economic and Financial Time Series*, Volume B, 1-40; **2005**.

"Correcting the Errors: On Volatility Forecast Evaluation Using High-Frequency Data and Realized Volatilities," with Tim Bollerslev and Nour Meddahi; *Econometrica* 73, 279-296; **2005**.

"Analytical Evaluation of Volatility Forecasts," with Tim Bollerslev and Nour Meddahi; *International Economic Review* 45, 1079-1110; **2004**. **Reprinted** 2002 in *Forecasting Financial Markets*, ed: T.C. Mills; International Library of Critical Writings in Economics; Edward Elgar, Cheltenham Glos, U.K. **Reprinted** 2018 in *Volatility, Volume II*, Eds.: T.G. Andersen and T. Bollerslev; International Library of Critical Writings in Economics; Chapter 14, 368-399; Edward Elgar Ltd., Cheltenham Glos, U.K.

"Modeling and Forecasting Realized Volatility," with Tim Bollerslev, Francis X. Diebold and Paul Labys; *Econometrica* 71, 579-625; **2003**. **Reprinted** 2018 in *Volatility, Volume II*, Eds.: T.G. Andersen and T. Bollerslev; International Library of Critical Writings in Economics; Chapter 18, 466-512; Edward Elgar, Cheltenham Glos, U.K.

"Micro Effects of Macro Announcements: Real-Time Price Discovery in Foreign Exchange," with Tim Bollerslev, Francis X. Diebold and Clara Vega; *American Economic Review* 93, 38-62; **2003**. **Reprinted** 2018 in *Volatility, Volume II*, Eds.: T.G. Andersen and T. Bollerslev; International Library of Critical Writings in Economics; Chapter 21; 573-597; Edward Elgar Ltd., Cheltenham Glos, U.K.

"An Empirical Investigation of Continuous-Time Models for Equity Returns," with Luca Benzoni and Jesper Lund; *Journal of Finance* 57, 1239-1284; **2002**.

"The Distribution of Realized Stock Return Volatility," with T. Bollerslev, F.X. Diebold and H. Ebens; *Journal of Financial Economics* 61, 43-76; **2001**.

"Variance-Ratio Statistics and High-Frequency Data," with Tim Bollerslev and Ashish Das; *Journal of Finance* 56, 305-327; **2001**.

"The Distribution of Realized Exchange Rate Volatility," with T. Bollerslev, F.X. Diebold and P. Labys; *Journal of American Statistical Association* 96, 42-55; **2001**. **Reprinted** 2005 in *Stochastic Volatility: Selected Readings*, Ch. 15, 451-479; Ed: Neil Shephard; Advanced Texts in Economics; Oxford University Press, Oxford, U.K. **Reprinted** 2018 in *Volatility, Volume II*, Eds.: T.G. Andersen and T. Bollerslev; International Library of Critical Writings in Economics; Chapter 17, 451-465; Edward Elgar Ltd., Cheltenham Glos., U.K.

"Exchange Rate Returns Standardized by Realized Volatility are (Nearly) Gaussian," with T. Bollerslev, F.X. Diebold and P. Labys; *Multinational Finance Journal* 4, 159-179; **2000**.

"Great Realisations," with T. Bollerslev, F.X. Diebold and P. Labys; *Risk Magazine* 18, 105-108; **2000**.

"Intraday and Interday Volatility in the Japanese Stock Market," with Tim Bollerslev and Jun Cai; *Journal of International Financial Markets, Institutions & Money* 10, 107-130; **2000**.

"Some Reflections on Analysis of High Frequency Data," *Journal of Business & Economic Statistics* 18, 146-153; **2000**.

"Forecasting Financial Market Volatility: Sampling Frequency vis-a-vis Forecast Horizon", with Tim Bollerslev and Steve Lange; *Journal of Empirical Finance* 6, 457-477; **1999**.

"Efficient Method of Moments Estimation of a Stochastic Volatility Model: A Monte Carlo Study," with Hyung-Jin Chung and Bent E. Sørensen; *Journal of Econometrics* 91, 61-87; **1999**.

"Answering the Skeptics: Yes, Standard Volatility Models Do Provide Accurate Forecasts," with Tim Bollerslev; *International Economic Review* 39, 885-905; **1998**. Reprinted 2002, *Forecasting Financial Markets*, ed: T.C. Mills; International Library of Critical Writings in Economics; Edward Elgar, Cheltenham Glos, U.K. Reprinted 2018 in *Volatility, Volume II*, Eds.: T.G. Andersen and T. Bollerslev; International Library of Critical Writings in Economics; Chapter 13, 347-367; Edward Elgar Ltd., Cheltenham Glos, U.K.

"Towards a Unified Framework for High and Low Frequency Return Volatility Modeling," with Tim Bollerslev; *Statistica Neerlandica* 52, 273-302; **1998**.

"Deutsche Mark-Dollar Volatility: Intraday Activity Patterns, Macroeconomic Announcements, and Longer Run Dependencies," with Tim Bollerslev; *Journal of Finance* 53, 219-265; **1998**. Reprinted 2005 in *Foreign Exchange Markets*, Ch. 6, 133-179; Ed: R.J. Sweeney; International Library of Critical Writings in Financial Economics, Series Editor: R. Roll; Edward Elgar Ltd, Cheltenham Glos, U.K.

"ARCH and GARCH Models," with Tim Bollerslev; *Encyclopedia of Statistical Sciences, Update Volume 2*, Eds.: S. Kotz, C.B. Read, and D.L. Banks; New York: Wiley & Sons, 6-16; **1998**.

"Heterogeneous Information Arrivals and Return Volatility Dynamics: Uncovering the Long-Run in High Frequency Returns," with Tim Bollerslev; *Journal of Finance* 52, 975-1005; **1997**.

"Estimating Continuous Time Stochastic Volatility Models of the Short Term Interest Rate," with Jesper Lund; *Journal of Econometrics* 77, 343-377; **1997**. Reprinted 2018 in *Volatility, Volume I*, Eds.: T.G. Andersen and T. Bollerslev; International Library of Critical Writings in Economics; Chapter 23, 534-568; Edward Elgar Ltd., Cheltenham Glos, U.K.

"GMM and QML Asymptotic Standard Deviations in Stochastic Volatility Models: Comments on Ruiz (1994)," with Bent Sørensen; *Journal of Econometrics* 76, 397-403; **1997**.

"Intraday Periodicity and Volatility Persistence in Financial Markets," with Tim Bollerslev; *Journal of Empirical Finance* 4, 115-158; **1997**. Reprinted 2005 in *Foreign Exchange Markets*, Chapter 5, 89-132; ed. RJ Sweeney; International Library of Critical Writings in Financial Economics, Series Editor: R. Roll; Edward Elgar Ltd, Cheltenham Glos, U.K. Reprinted 2018 in *Volatility, Volume II*, Eds.: T.G. Andersen and T. Bollerslev; International Library of Critical Writings in Economics; Chapter 12, 303-346; Edward Elgar Ltd., Cheltenham Glos, U.K.

"GMM Estimation of a Stochastic Volatility Model: A Monte Carlo Study," with Bent Sørensen; *Journal of Business & Economic Statistics* 14, 328-352; **1996**.

"Return Volatility and Trading Volume: An Information Flow Interpretation of Stochastic Volatility," *Journal of Finance* 51, 169-204; **1996**. Reprinted 2018 in *Volatility, Volume I*, Eds.: T.G. Andersen and T. Bollerslev; International Library of Critical Writings in Economics; Chapter 18, 387-422; Edward Elgar Ltd., Cheltenham Glos, U.K.

"Stochastic Autoregressive Volatility: A Framework for Volatility Modeling," *Mathematical Finance* 4, 75-102; **1994**. Reprinted 2005 in *Stochastic Volatility: Selected Readings*, Chapter 7, 177-208; edited by Neil Shephard; Advanced Texts in Economics, Series Editors: Manuel Arellano, Guido Imbens, Grayham E. Mizon, Adrian Pagan and Mark Watson; Oxford University Press, Oxford, United Kingdom. Reprinted 2018 in *Volatility, Volume I*, Eds.: T.G. Andersen and T. Bollerslev; International Library of Critical Writings in Economics; Chapter 20, 447-474; Edward Elgar Ltd., Cheltenham Glos, U.K.

Summaries, Book Reviews and Comments:

Realized Volatility, Asset Pricing, and Risk Management, with T. Bollerslev; *NBER Reporter*, 7-10; Fall 2006.

Comment (P.R. Hansen & A. Lunde: *Realized Variance and Market Microstructure Noise*), with T. Bollerslev, P.H. Frederiksen & M.Ø. Nielsen; *Journal of Business & Economic Statistics* 24, 173-179, 2006.

Discussion (of Ole E. Barndorff-Nielsen and Neil Shephard: "Power and Bipower Variation with Stochastic Volatility and Jumps"), *Journal of Financial Econometrics* 2, 37-48, 2004.

Comments on Benjamin H. Cohen and Eli M. Remolona: Information flows during the Asian crisis: Evidence from closed-end funds, *BIS Papers* 2 (*Market Liquidity: Proceedings from BIS Workshop*), 73-75, 2001.

Book Review: "Simulation-Based Econometric Methods," (Gouriéroux, C. and A. Monfort, Oxford University Press); *Econometric Theory* 16, 131-138, 2000.

Book Review: "The Econometrics of Financial Markets," (Campbell, J.Y., A.W. Lo and A.C. MacKinlay, Princeton University Press); *Econometric Theory* 14, 671-685, 1998.

Comment (Jacquier, E., N.G. Polson & P.E. Rossi: "Bayesian Analysis of Stochastic Volatility Models"), *Journal of Business and Economic Statistics* 12, 389-392, 1994.

Comments on Li, H., I. Mathur, T.V. Schwarz & A.C. Szakmary: "Dynamic Efficiency in the Treasury Bill and Eurodollar Futures Market and Implications for the TED Spread," *Review of Futures Markets* 13, 301-305, 1994.

Working Papers:

"The Granular Origins of Tail Dispersion Risk in the Cross-Section of Asset Prices," with Yi Ding and Viktor Todorov, July 2024.

"Inference for VIX and Related Option Portfolios," with Nicola Fusari, Viktor Todorov, and Rasmus T. Varneskov; Working Paper, February 2024.

"Beyond the VIX: Model-Free Spot Volatility and Tail Indices from Short-Dated Options," with Chun He and Viktor Todorov; December 2023.

"The Factor Structure of Systematic Jump Risk," with Viktor Todorov and Seunghyeon Yu; December 2023; close to journal submission.

"VIX Maturity Interpolation," with Oleg Bondarenko and Maria Gonzalez-Perez; under revision for completion of Cboe Option Institute Data Grant, February 2024.

"FX Invariance," with Oleg Bondarenko, Eleni Gousgounis, and Esen Onur; under preparation for resubmission to the *Journal of Econometrics*.

"Testing for Stationarity of Volatility Curves," with Yingwen Tang, Viktor Todorov, and Zhiyuan Zhang; under preparation for submission to *Quantitative Economics*.

"Real-Time Detection of Local No-Arbitrage Violations," with Viktor Todorov and Bo Zhou; under review at *Econometrica*.

"Intraday Trading Invariance in the E-Mini S&P 500 Futures Market," with Oleg Bondarenko, Pete Kyle, and Anna Obizhaeva; Under revision for submission.

"A Corridor Fix for High-Frequency VIX: Developing Coherent Implied Volatility Measures," with Oleg Bondarenko and Maria Gonzalez-Perez; Working Paper. Under revision for submission.

“Dissection the Pricing of Equity-Index Volatility,” with Oleg Bondarenko; Working Paper under Revision, Kellogg School, Northwestern University.

“Duration-Based Volatility Estimation,” with Dobrislav Dobrev and Ernst Schaumburg; Working Paper, Department of Finance, Kellogg School, Northwestern University.

Outside Activities

Authored *Brief for Amicus Curiae* in the U.S. Court of Appeals for the Second Circuit (on appeal from the U.S. District Court for the Eastern District of New York): **18-1503** Finance Professor Torben G Andersen in support of Defendant-Appellant (**Mark Johnson**) and urging reversal. September 2018.

Unpaid Consultant, CFTC, 2020-present.

Ad hoc consultant; Brattle and Charles River Associates