

Viktor Tsyrennikov

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Current Position

Co-head of the Quantitative Services Practice
Lead for Stress Testing and AI Modeling
Promontory, Washington DC

I oversee a highly-skilled team of modelers and model risk experts working on a wide range of topics – AI, climate risks, digital assets, credit risk, market risk, and stress testing. I help financial institutions build and review their financial models.

Research interests: International Finance, Macroeconomics, Computational Finance/Economics.

Past Positions

- Resident Scholar at the Research Department
The International Monetary Fund, July 2014–September 2015
- Assistant Professor of Economics
Cornell University, July 2007–June 2014
- Visiting Assistant Professor of Economics
University of Zurich, Spring 2014
- Visiting Assistant Professor of Economics
New York University, Fall 2013

Education

- Ph.D. in Economics, New York University, 2007
- M.A. in Economics, Kyiv School of Economics, 2002
- M.A. in Management of Information Systems, Lviv National University, 2000

Publications

1. B.Jovanovic and V.Tsyrennikov. 2022. “Trading on Sunspots,” *American Economic Review*.
2. L.Blume, T.Cogley, D.Easley, T.Sargent, and V.Tsyrennikov. 2018. “A Case for Incomplete Markets.” *Journal of Economic Theory*.

3. C.Arellano, L.Maliar, S.Maliar, and V.Tsyrennikov. 2016. “Envelope Condition Method with an Application to Default Risk Models.” *Journal of Economic Dynamics and Control*.
4. K.Rabitsch, S.Stepanchuk, and V.Tsyrennikov. 2015. “International Portfolios: A Comparison of Solution Methods.” *Journal of International Economics*.
5. W.Lian, D.Leigh, M.Poplawski-Ribeiro, and V.Tsyrennikov. 2015. “Exchange Rates and Trade Flows: Disconnected?” *IMF World Economic Outlook*.
6. Stepanchuk,S. and V.Tsyrennikov. 2015. “Portfolio and Welfare Consequences of Debt Market Dominance,” *Journal of Monetary Economics*.
7. Tsyrennikov, V. 2013. “Capital Flows and Moral Hazard,” *Journal of Monetary Economics*.
8. Cogley,T., T.Sargent, and V.Tsyrennikov. 2013. “Wealth Dynamics in a Bond Economy with Heterogeneous Beliefs.” *Economic Journal*.
9. Cogley, Timothy, Thomas J. Sargent, and Viktor Tsyrennikov. 2012. “Market Prices of Risk with Diverse Beliefs, Learning, and Catastrophes.” *American Economic Review P&P*.
10. Tsyrennikov, Viktor. 2012. “Heterogeneous Beliefs, Wealth Distribution, and Asset Markets with Risk of Default.” *American Economic Review P&P*.
11. Chen, Xiaohong, Yanqing Fan and Viktor Tsyrennikov. 2006. “Efficient Estimation of Semiparametric Copula Models.” *Journal of American Statistical Association*.
12. Tsyrennikov, Viktor. 2002. “Inflation and Growth,” *Economic Notes* (National Science Academy of Ukraine).

Working Papers

1. “Capital Flows, Speculation, and Regulation,” with O.Rarytska.
2. “Climate Risk, Non-Believers, and Optimal Intervention,” with O.Rarytska.
3. “Diverging Micro and Macro Volatility in a Search Model,” with O.Rarytska.

Selected Industry Projects

- Reviewed and developed AI/ML models used in mortgage underwriting, transaction monitoring, and model risk management.

- Developed comprehensive stress-testing methodologies covering tens of thousands of financial instruments for large financial institutions.
- Authored the research on “bank systemicness” for a winning systemically important financial institutions (SIFI) de-designation application to the U.S. Treasury.
- Developed large macroeconomic models for national banks and insurers.

Teaching Experience

- International Finance (7 semesters)
Undergraduate level, Cornell University
Highest evaluation score: 4.7 out of 5
- Computational Economics and Finance (7 semesters)
Ph.D. level, Cornell University and NYU
Highest score: 5.0 out of 5
- Macroeconomics (7 semesters)
Ph.D. level, core class, Cornell University
Highest score: 4.9 out of 5
- Model Uncertainty in Asset Pricing and Macroeconomics (short lecture series)
Ph.D. level, University of Zurich

Presentations

Boston University, Colgate University, Essex, Georgetown University, George Washington University, Goethe University, New York University, Pennsylvania State University, Università Cattolica del Sacre Cuoro, University of Miami, UCLA, University of Southampton, University of Zurich, University of British Columbia, University of Virginia, Washington University of St.Louis.

ECB, IMF, Federal Reserve Board, FRB of Atlanta, FRB of New York, FRB of Philadelphia, FRB of Richmond, FRB of St.Louis.

Conference Presentations

SCEF 2021, SITE 2020,2014, AEA Meetings 2018,2017,2015 SED 2018,2016,2015,2012,2010,2007, CB 2014, ITAM 2014, NBER Summer Institute 2015,2013, Carnegie-Rochester-NYU conference 2012, Midwest Macro Meetings 2009,2011,2012, AEA 2010,2012, Cornell/PennState Macro Workshop 2007-2012.

Referee

Journal of Political Economy, American Economic Review, Review of Economic Studies, Journal of Economic Theory, Journal of International Economics, Review of Economic

Dynamics, Journal of European Economic Association, International Economic Review, Journal of Economic Dynamics and Control, Macroeconomic Dynamics

Advising

- Doctoral thesis adviser: Samreen Malik (NYU Abu Dhabi), Tianli Zhao (WB)
- Doctoral thesis committee: Koralai Kirabaeva (IMF), Alexander Erdelyi (OR), Rahul Anand (IMF), Yusuke Tatenno (UN), Russell Toth (National U of Australia), Liheng Xu (U of Melbourne), Esther Mezey-Washburn (industry), Minwook Kang (industry), Grace Gu (UC of Santa Cruz)
- Honors thesis adviser: Zachary Peskin, Sidhant Trivedi, Jing Zhou
- Student investment club adviser: Cornell Financial Club and Apex Capital

Awards

- Promontory Excellence Award, 2019
- IMF Fellowship 2014-5
- Special recognition as “Outstanding referee” for Journal of Economic Behavior and Organization, 2020
- Special recognition as “Outstanding referee” for American Economic Review, 2008
- McCracken Fellowship, New York University, 2002-2006
- Special recognition “For Contribution to the Economics Program,” Kyiv School of Economics, 2002
- Citibank Fellowship for a semester study at Harvard University, 2001

Technical skills

1. High performance computing (C++, Fortran, Julia), big data (Spark, SQL), AI/ML (TensorFlow, PyTorch, Scikit-learn), cloud computing (AWS, GCP)

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