Tyler J. Pike

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SSRN ∘ Google Scholar ∘ GitHub

Education

2018-2020	**Harvard University, Harvard Extension School**	Cambridge, MA

Non-degree graduate student in Mathematics and Statistics

2014–2018	**University of Richmond**	Richmond, VA

Bachelor of Science in Mathematical Economics, magna cum laude
- University of Edinburgh, Scotland, United Kingdom (Spring 2017)
- Activities: Mock Trial (Treasurer, Varsity Captain), NXG Investment Fund, Writing Consultant

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Experience

2018-Present	**Board of Governors of the Federal Reserve**	Washington, DC

Special Appointment as Research Assistant to Vice Chair Clarida (2020–Present)

- Prepare detailed analysis covering monetary policy topics such as FOMC communications, prescriptive policy rules, and estimating inflation expectations for Vice Chair Clarida

Senior Research Assistant

Research and Policy
- Co-authoring 5 academic papers dealing with macro-financial and econometric topics such as bank lending standards, corporate risk, economic forecasting, and machine learning based impulse responses
- Co-authored 3 internal policy memos and 1 technical primer
- Presented original research at 5 MFA reading groups and 1 international academic conference
- Acted as lead RA on four high-profile policy products, including the June 2019 Monetary Policy Report to Congress and the Jan. 2020 Tealbook

Other Roles
- Serving on the leadership subcommittee of the Board-wide committee to redesign RA training
- Serving as co-instructor for MA University, teaching technical skills to a class of new research assistants, technology analyst, and financial analyst

Summer 2017	**Federal Reserve Bank of Chicago**	Chicago, IL

Economic Research Intern
- Supported the Financial Markets group, with a focus on central counterparties and systemic risk

2015–2018	**University of Richmond**	Richmond, VA

Economic Research Fellow (Summer 2016)
- Presented independent research about the interaction of technology and migrants' financial behavior at the Federal Reserve Bank of Dallas and the University of Richmond

Economic Research Assistant (2015–2018)
- Built databases and programmed statistical analysis contributing to academic articles about international trade, labor, and technology
- Tutored students in macroeconomics and guest lectured a class of 30 students on financial markets

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Technology Skills

Primary Tools: Git, LaTeX, SQL, R, Python, Unix

Additional Tools: Java, Matlab, Microsoft Office, Stata, SAS

Concepts: Machine learning, Natural language processing, Distributed and parallel computing

Teaching Experience

University of Richmond

- Writing consultant: assisted undergraduate and graduate students in constructing and organizing arguments for academic papers (2016 - 2018)
- Economics teaching assistant: tutored students in Dr. Andrea Waddle's macroeconomic class and hosted supplementary lectures on financial markets (2017 - 2018)

Federal Reserve Board

- FedEd: taught high schoolers about economics and personal finance (2018-2019)
- Howard University's Data Analysis and Financial Literacy in R: taught undergraduate programming and data analysis skills (2019-2020)
- MA University: taught new Federal Reserve Board employees data management and programming (2020)

Research

Working Papers

- "Estimation and Inference of Impulse Responses with Random Forests," with Francisco Vazquez-Grande
- "Combining forecasts: Can machines beat the average?," with Francisco Vazquez-Grande
- "A tree-based model to evaluate the determinants of changes in bank lending standards in the U.S.," with Horacio Sapriza
- "Credit Supply Shocks and the Macroeconomy: The Predictive and Causal Role of Bank Lending Standards," with Elijah Broadbent and Horacio Sapriza
- "Bottom-up leading macroeconomic indicators: An application to non-financial corporate defaults using machine learning," with Horacio Sapriza, and Tom Zimmermann

Fed's Notes

- "Out-of-sample performance of recession probability models" with Francisco Vazquez-Grande (2019)

Policy Memos

- "Out-of-sample performance of recession probability models" with Francisco Vazquez-Grande (2019)
- "Machine Learning Recession Probability" with Francisco Vazquez-Grande (2019)
- "Building a Statistical FCI Using Partial Least Squares" with Kurt Lewis (2019)

Presentations

- "Bank Credit Supply Shocks and Economic Activity: The Role of Lending Standards" MFA reading group, Washington, DC (2020)
- "The Fast and Frugal Tree and Recession Probabilities," MFA reading group, Washington, DC (2020)
- "Determinants of bank lending standards in the United States,"
  - International Finance and Banking Society Conference, Medellin, Colombia (2019)
  - MFA reading group, Washington, DC (2019)
- "Bottom-up leading macroeconomic indicators: An application to non-financial corporate defaults using machine learning," MFA reading group, Washington, DC (2019)
- "Building a Statistical FCI Using Partial Least Squares," MFA reading group, Washington, DC (2019)
- "Technology, Distance, and Bilateral Remittance Flows,"
  - University of Richmond Research Symposium, Richmond, VA (2018)
  - Federal Reserve Bank of Dallas' Economic Scholars Conference, Dallas, TX (2018)