

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

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 analysts, and financial analysts
- 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

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)