# Saeed Zaman

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# **Professional Experience**

Research Economist II, Federal Reserve Bank of Cleveland, January 2022-

Economist, Federal Reserve Bank of Cleveland, 2014-2021

Senior Economic Analyst, Federal Reserve Bank of Cleveland, 2010-2013

Economic Analyst, Federal Reserve Bank of Cleveland, 2004-2010

Research Analyst, Federal Reserve Bank of Cleveland, 2002-2004

Student Intern, Center for Scholarly Technology, University of Southern California, 2001-2002

## Education

Ph.D., Economics (2021), University of Strathclyde, Glasgow, UK Supervisors: Professor Gary Koop (primary) and Professor Julia Darby (secondary)

**Postgraduate Diploma**, Research Methodology in Business and Management (2021), University of Strathclyde, Glasgow, UK

M.A., Economics (2012), Cleveland State University, Cleveland, OH, USA

M.S., Computer Science (2002), University of Southern California, CA, USA

B.S., Computer System Engineering (2000), G.I.K Institute of Engineering Sciences, Pakistan

# **Research Interests**

Primary: Empirical Macroeconomics; Inflation; Nowcasting/Forecasting; Monetary Policy Secondary: Bayesian Econometrics; Energy Economics; Empirical Finance; Machine Learning

#### **Academic Journal Publications**

"Improving Inflation Forecasts Using Robust Measures" with Randal Verbrugge (2023), *International Journal of Forecasting*, accepted [link to Federal Reserve Bank of Cleveland working paper no. 22-23]

"The Hard Road to a Soft Landing: Evidence from a (Modestly) Nonlinear Structural Model" with Randal Verbrugge (2023), *Energy Economics*, *accepted*[link to Federal Reserve Bank of Cleveland working paper no. 23-03]

"Real-Time Density Nowcasts of US Inflation: A Model-Combination Approach," with Edward Knotek II (2021), *International Journal of Forecasting*, *forthcoming*https://doi.org/10.1016/j.ijforecast.2022.04.007

"Asymmetric Responses of Consumer Spending to Energy Prices: A threshold VAR approach," with Edward Knotek II (2021), *Energy Economics*, 95: 105127 (*lead article*) https://doi.org/10.1016/j.eneco.2021.105127

"Combining Survey Long-Run Forecasts and Nowcasts with BVAR Forecasts Using Relative Entropy," with Ellis W. Tallman (2020), *International Journal of Forecasting*, 36(2): 373-398 <a href="https://doi.org/10.1016/j.ijforecast.2019.04.024">https://doi.org/10.1016/j.ijforecast.2019.04.024</a>

"Financial Nowcasts and Their Usefulness in Macroeconomic Forecasting," with Edward Knotek II (2018), *International Journal of Forecasting*, 35(4): 1708-1724 <a href="https://doi.org/10.1016/j.ijforecast.2018.10.012">https://doi.org/10.1016/j.ijforecast.2018.10.012</a>

"The Usefulness of the Median CPI in Bayesian VARs used for Macroeconomic Forecasting and Policy," with Brent Meyer (2019), *Empirical Economics*, 57(2):603-630 https://doi.org/10.1007/s00181-018-1472-1

"Nowcasting U.S. Headline and Core Inflation," with Edward Knotek II (2017), *Journal of Money, Credit and Banking*, 49(5): 931-968 https://doi.org/10.1111/jmcb.12401

"Forecasting Inflation: Phillips Curve Effects on Services Price Measures," with Ellis W. Tallman (2017), *International Journal of Forecasting*, 33(2): 442-457 <a href="https://doi.org/10.1016/j.ijforecast.2016.10.004">https://doi.org/10.1016/j.ijforecast.2016.10.004</a>

"Evidence of Forward-Looking Loan Loss Provisioning with Credit Market Information," with Lakshmi B. and James T. (2017), *Journal of Financial Services Research*, 52(3): 191-223 https://doi.org/10.1007/s10693-016-0255-0

"Credit Market Information Feedback," with Lakshmi Balasubramanyan, Ben Craig, and James Thomson (2016), *Atlantic Economic Journal*, 44(3): 405-407 https://doi.org/10.1007/s11293-016-9501-y

#### Federal Reserve Publications/Policy articles

- "A Real-Time Assessment of Inflation Nowcasting at the Cleveland Fed" with Edward Knotek II (2023) Federal Reserve Bank of Cleveland Economic Commentary, no. 2023-06 [link]
- "Adjusting Median and Trimmed-Mean Inflation Rates for Bias Based on Skewness" with Robert Rich and Randal Verbrugge (2022) Federal Reserve Bank of Cleveland Economic Commentary, no. 2022-05 [link]
- "Whose Inflation Expectations Best Predict Inflation?" with Randal Verbrugge (2021) Federal Reserve Bank of Cleveland Economic Commentary, no. 2021-19 [link]
- "Cyclical versus Acyclical Inflation: A Deeper Dive" Federal Reserve Bank of Cleveland Economic Commentary, no. 2019-13 [link]
  - Data is <u>available</u> to download from the San Francisco Fed website
- "Have Inflation Dynamics Changed?" with Edward Knotek II (2017) Federal Reserve Bank of Cleveland Economic Commentary, no. 2017-21 [link]
- "The Likelihood of 2 Percent Inflation in the Next Three Years" with Ellis W. Tallman (2016) Federal Reserve Bank of Cleveland *Economic Commentary*, no. 2016-14 [link]
- "Federal Funds Rates Based on Seven Simple Monetary Policy Rules" with Edward Knotek II, Randy Verbrugge, Christian Garciga, and Caitlin Treanor (2016) Federal Reserve Bank of Cleveland Economic Commentary, no. 2016-07 [link]
- "Measuring Inflation Forecast Uncertainty" with Edward Knotek II and Todd E. Clark (2015) Federal Reserve Bank of Cleveland Economic Commentary, no. 2015-03 [link]
- "On the Relationships between Wages, Prices, and Economic Activity" with Edward Knotek II (2014) Federal Reserve Bank of Cleveland Economic Commentary, no. 2014-14 [link]
- "The Slowdown in Residential Investment and Future Prospects" with Edward Knotek II (2014) Federal Reserve Bank of Cleveland Economic Commentary, no. 2014-10 [link]
- "Using an Improved Taylor Rule to Predict When Policy Changes Will Occur" with Charles Carlstrom (2014) Federal Reserve Bank of Cleveland Economic Commentary, no. 2014-02 [link]

- "When Might the Federal Funds Rate Lift Off? Computing the Probabilities of Crossing Unemployment and Inflation Thresholds (and Floors)" with Edward Knotek II (2013) Federal Reserve Bank of Cleveland Economic Commentary, no. 2013-19 [link]
- "Improving Inflation Forecasts in the Medium to Long Term" (2013), Federal Reserve Bank of Cleveland Economic Commentary, no. 2013-16 [link]
- "Forecasting Implications of the Recent Decline in Inflation" with Todd E. Clark (2013), Federal Reserve Bank of Cleveland Economic Commentary, no. 2013-15 [link]
- "Forecasting Inflation? Target the Middle" with Brent Meyer and Guhan Venkatu (2013), Federal Reserve Bank of Cleveland Economic Commentary, no. 2013-05 [link]
- "Where Would the Federal Funds Rate Be, If It Could Be Negative?" with Ellis W. Tallman (2012), Federal Reserve Bank of Cleveland Economic Commentary, no. 2012-15, This commentary attracted overwhelming media attention, and generally was very well liked [link]
- "Macroeconomic Models, Forecasting, and Policymaking" with Andrea Pescatori (2011), Federal Reserve Bank of Cleveland Economic Commentary, no. 2011-19 [link]
- "Food and Energy Price Shocks: What Other Prices Are Affected?" with Todd E. Clark (2011), Federal Reserve Bank of Cleveland Economic Commentary, no. 2011-14 [link]
- "Buy a Home or Rent? A Better Way to Choose" with Emre Ergungor (2011), Federal Reserve Bank of Cleveland Economic Commentary, no 2011-06 [link]
- "Unemployment after the Recession: A New Natural Rate?" with Murat Tasci (2010), Federal Reserve Bank of Cleveland Economic Commentary, no. 2010-11 [link]
- "Are We Engineering Ourselves out of Manufacturing Jobs?" with Mark Schweitzer (2006), Federal Reserve Bank of Cleveland Economic Commentary, January 2006 [link]

## **Working Papers**

- "Post-COVID Inflation Dynamics: Higher for Longer" with Randal Verbrugge, Federal Reserve Bank of Cleveland working paper no. 23-06. [Under review] [link]
- "A Unified Framework to Estimate Macroeconomic Stars," Federal Reserve Bank of Cleveland working paper no. 21-23r. [Under review] [link]
- "A Medium Scale Forecasting Model for Monetary Policy" with Kenneth Beauchemin, Federal Reserve Bank of Cleveland working paper no. 11-28. [Permanent Working Paper] [link]

## **Research in Progress**

- "Asymmetric News Coverage of Energy Price Fluctuations" with Edward Knotek II
- "On the Relationship Between Inflation and Inflation Expectations" with James Mitchell
- "New Model of Trend Inflation Using Disaggregates, Survey Expectations, and Uncertainty" with Ellis Tallman
- "Oil Shocks and US Banks: A SVAR Approach" with Paolo Gelain and Marco Lorusso

# Published papers for which I provided research assistance

"The Incidence of Nominal and Real Wage Rigidities in Great Britain: 1978-98" by Richard Barwell, and Mark Schweitzer, (2007) *The Economic Journal*, Volume 117, Issue 524, pages F553-F569

"Theory, measurement and calibration of macroeconomic models", Paul Gomme and Peter Rupert, *Journal of Monetary Economics*, Volume 54(2007) 460-497

# **Economic Trend Articles (Cleveland Fed)**

- "Explaining Low Inflation: Model-Based Decomposition", November 2015
- "The Gap between Services Inflation and Goods Inflation", June 2015
- "Uncertainty and Risk around the FOMC's Macroeconomic Forecasts: Back to Normal", June 2014
- "<u>Does Nonfarm Payroll Growth Improve the Taylor Rule</u>?" (with Chuck Carlstrom and Samuel Chapman), February 2013
- "The Credit Environment for Business Loans" (with Yuliya Demyanyk and Kent Cherny), May 2009
- "Fourth District Bank Holding Companies" (with Joseph Haubrich and Kent Cherny), April 2009
- "FDIC Funds" (with Joseph Haubrich and Kent Cherny), March 2009
- "Fourth District Community Banks" (with Joseph Haubrich and Kent Cherny), December 2008
- "Business Loan Markets" (with Joseph Haubrich), November 2008

- "Fourth District Bank Holding Company Conditions" (with Joseph Haubrich), July 2008
- "Business Loan Markets" (with Joseph Haubrich), May 2008
- "FDIC Funds" (with Joseph Haubrich), May 2008
- "Fourth District Bank Holding Companies" (with Joseph Haubrich), April 2008
- "Banking Structure" (with Joseph Haubrich), February 2008
- "Business Loan Markets" (with Joseph Haubrich), February 2008
- "Fourth District Community Banks" (with Joseph Haubrich), January 2008
- "Fourth District Community Banks" (with Edward Nosal), December 2007
- "Business Loan Markets" (with Edward Nosal), November 2007
- "Mortgage Lending" (with Edward Nosal), November 2007
- "Fourth District Bank Holding Companies" (with Edward Nosal), October 2007

## **Awards**

*Spirit of Innovation Award*: for successful development, implementation, and communication of innovative forecasting tool) at the Federal Reserve Bank of Cleveland, 2014

Strategic Alignment Award: at the Federal Reserve Bank of Cleveland, 2005

Outstanding Academic Achievement Award: at University of Southern California, 2001

**Best Senior Year Project Award**: by the Institute of Electrical and Electronics Engineers (IEEE) at the senior year project competition, 2000

United Way *Outstanding Volunteer Award* in 2008, 2009 and 2010 (Technical Coordinator)

## Tools I helped develop for public use

Nowcasts for the US Inflation (CPI and PCE). Daily nowcast estimates available here

Prescriptions from Seven Simple Monetary Policy Rules. Click here

A Simulation based Rent or Buy Calculator. Should you Rent or Buy? Click here

#### **Conference and Seminar Presentations**

2022: ESCoE Conference on Economic Measurement; Society of Economic Measurement Annual Conference; Midwest Macroeconomics Spring Conference; 5<sup>th</sup> Vienna Workshop on High-Dimensional Times Series in Macroeconomics and Finance; North American Summer Meetings of the Econometric Society; 30<sup>th</sup> Symposium of the Society of Nonlinear Dynamics and Econometrics (virtual); SUERF European Money and Finance Forum (virtual); 25<sup>th</sup> Central Bank Macroeconomic Modeling Workshop (virtual).

2021: ESCoE Conference on Economic Measurement (virtual); 27<sup>th</sup> International Conference Computing in Economics and Finance (virtual); European Seminar on Bayesian Econometrics (virtual); Post-Graduate Research Away Day, University of Strathclyde (virtual); NBER-NSF Seminar on Bayesian Inference in Econometrics and Statistics (virtual); Real-Time Data Analysis, Methods and Applications Conference organized by Banque de France (virtual); State Bank of Pakistan (invited webinar); Computational Finance and Econometrics Annual Conference (virtual)

2020: Joint Statistical Meetings, Philadelphia (virtual)

2019: Post-Graduate Research Away Day, University of Strathclyde, Glasgow, UK; Invited Seminar presentation at Ohio University; 6<sup>th</sup> Rimini Time Series Econometrics Workshop; 94<sup>th</sup> Annual Conference Western Economic Association; Midwest Econometrics Group (MEG) Conference, Columbus, Ohio

2018: Post-Graduate Research Away Day, University of Strathclyde, Glasgow, UK; Day-Ahead Inflation Workshop, Cleveland, OH; Society of Economic Measurement annual conference, Xiamen, China; International Institute of Forecasters' 37th International Symposium on Forecasting, Boulder, Colorado; 2<sup>nd</sup> Central Bank Forecasting Conference at Bank of England, London, UK; Midwest Econometrics Group (MEG) Conference, Madison, Wisconsin; Midwest Macroeconomics Fall Conference, Nashville, Tennessee

2017: Midwest Econometrics Group (MEG) conference, College Station, Texas; Invited Seminar presentation at Reserve Bank of New Zealand, Wellington, NZ; International Institute of Forecasters' 37th International Symposium on Forecasting, Cairns, Australia

2016: Third annual conference of the International Association of Applied Econometrics, Milan, Italy; International Institute of Forecasters' 36th International Symposium on Forecasting, Santander, Spain; 24<sup>th</sup> Society of Nonlinear Dynamics and Econometrics, Alabama

2015: Federal Reserve System Committee on Macroeconomics Day-Ahead Workshop on Inflation, Cleveland, OH; International Institute of Forecasters' 35th International Symposium on Forecasting, Riverside, California; Eastern Economics Association 41<sup>st</sup> Annual Conference, NY

2014: Interagency (FDIC, OCC, and Philadelphia Fed) Risk Quantification Forum, Washington D.C.; Financial Engineering and Banking Society (FEBS), Surrey, UK

# **Conference and Seminar Discussions**

2023: "A Simple Correction for Misspecification in Trend-Cycle Decompositions with an Application to Estimating Rstar," by James Morley (University of Sydney), Trung Duc Tran (University of Sydney), and Benjamin Wong (Monash University). Virtual Time Series Seminar

2019: "Nominal GDP Targeting for a Speedier Economic Recovery," by David Eagle (Eastern Washington University). Western Economic Association 94<sup>th</sup> Conference, San Francisco, CA

2015: "The State Dependent Effects of Monetary Policy on Asset Prices: Risk Premium and Bubbles," by Cheng Zhou (Texas A&M). Eastern Economic Association 41<sup>st</sup> Conference, NY

# **Teaching Experience**

*Guest Lecture*, Federal Reserve and Monetary Policy, Executive MBA Class, University of Wisconsin, Oshkosh, December 2018

Guest Lecture, Federal Reserve and Monetary Policy, Undergraduate Money and Banking, Kent State University, April 2019

#### **Professional Development**

Barcelona Graduate School of Economics: Macroeconometrics Summer School (2018)

Federal Reserve Bank of New York: 41st Central Banking Seminar (Oct. 2017; by nomination)

*University of Pennsylvania:* Penn Institute for Economic Research (PIER) Workshop on Quantitative Tools for Macroeconomic Policy Analysis (May 2016)

Northwestern University: Advanced Workshop for Central Bankers (on frontier models and techniques in Monetary Economics) by Center for International Macroeconomics (2009)

National Association of Business Economics (NABE): Applied Econometrics (2008); Applied Time Series Analysis and Forecasting (2010); Economic Measurement Seminar (2011)

Timberlake Consultants: Time Series Analysis and Forecasting using Stata (2007)

## **Professional Activities**

**Referee services**: Journal of Econometrics; Journal of Business and Economic Statistics; Journal of Applied Econometrics; Journal of Money, Credit and Banking; International Journal

of Forecasting; Journal of Forecasting; Journal of Economic Dynamics and Control; Energy Economics; The Energy Journal; Empirical Economics; Economic Modeling; Economia; Journal of Business Cycle Research; Journal of Economic Studies; Contemporary Economics

Affiliations: American Economic Association, European Economic Association, Society of Econometrics; International Institute of Forecasters; Society for Nonlinear Dynamics and Econometrics; Euro Area Business Cycle Network; National Association of Business Economics; the Energy Institute

Other: Co-organizer of the conference on Real-Time Data Analysis, Methods, and Applications, 2022 (<u>link</u>). Program Committee member for the 2022 annual conference of the Society for Economic Measurement (<u>link</u>). Scientific Program Committee member for the 17<sup>th</sup> International Conference of the Computational and Financial Econometrics (<u>link</u>). Scientific Program Committee member and local organizer of the 2023 Meeting of the Midwest Econometrics Group (<u>link</u>).

## **Computing Skills**

Software Languages: C/C++, Prolog, UNIX, SQL, Macromedia ColdFusion, Java Server Pages (JSP), Perl, PHP, XML, JavaScripting

Econometric/Statistical Packages: SAS, STATA, RATS, EVIEWS, MATLAB (proficient), Gauss, R, Python; and Dynare

Economic Research Tools/DATA: Bloomberg, Haver Analytics, Current Population Survey Utilities (Unicon), Census, Panel Study of Income Dynamics, Integrated Public Use Microdata Series (IPUMS), ArcGIS; Federal Reserve Senior Loan Officer Opinion Survey (SLOOS); Confidential Supervisory CAMELS data; COMPUSTAT

#### **Personal**

Citizenship: USA, Pakistan

Languages: Urdu (native), English (fluent), Arabic (read and write), Hindi (speak fluently)

## References

Barry Boehm (Email: boehm@usc.edu Phone: (213) 740-8163)

Distinguished Professor of Computer Science and TRW Professor in Software Engineering, University of Southern California, US

Todd Clark (Email: todd.clark@clev.frb.org Phone: (216) 579-2015) Senior Vice President, Federal Reserve Bank of Cleveland, US

Edward Knotek II (Email: <u>Edward.knotek@clev.frb.org</u> Phone: (216) 579-2180) Research Director, Senior Vice President, Federal Reserve Bank of Cleveland, US Gary Koop (Email: gary.koop@strath.ac.uk)

Professor, Department of Economics, University of Strathclyde, Glasgow, UK

Vasilios Kosteas (Email: <u>b.kosteas@csuohio.edu</u> Phone: (216) 687-4526)

Chair and Professor, Department of Economics, Cleveland State University, US

Peter Rupert (Email: rupert@econ.ucsb.edu Phone: (805) 893-3569)

Professor, Economics department University of California Santa Barbara, US

Ellis Tallman (Email: Ellis.Tallman@clev.frb.org Phone: (440) 775-8592)

Executive Vice President, Federal Reserve Bank of Cleveland, US