

# Saeed Zaman

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## **Professional Experience**

*Senior Research Economist*, Federal Reserve Bank of Cleveland, January 2025-

*Research Economist II*, Federal Reserve Bank of Cleveland, 2022-2024

*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; Nowcasting/Forecasting; Monetary Policy

Secondary: Bayesian Econometrics; Energy Economics; Empirical Finance; Machine Learning

## **Academic Journal Publications**

### ***“A Unified Framework to Estimate Macroeconomic Stars”***

*The Review of Economics and Statistics*, accepted [Cleveland Fed Working paper [link](#)]

***“Forecasting Core Inflation and its Goods, Housing, and Supercore Components”*** with Todd Clark and Matthew Gordon (2024), *International Journal of Central Banking*, forthcoming [Cleveland Fed Working paper [link](#)]

***“Post-COVID Inflation Dynamics: Higher for Longer”*** with Randal Verbrugge (2024), *Journal of Forecasting*, 43(4): 871-893, <https://doi.org/10.1002/for.3070>

***“Improving Inflation Forecasts Using Robust Measures”*** with Randal Verbrugge (2024), *International Journal of Forecasting*, 40(2): 735-745  
<https://doi.org/10.1016/j.ijforecast.2023.05.003>

***“The Hard Road to a Soft Landing: Evidence from a (Modestly) Nonlinear Structural Model”*** with Randal Verbrugge (2023), *Energy Economics*, Vol. 123: 106733  
<https://doi.org/10.1016/j.eneco.2023.106733>

***“Real-Time Density Nowcasts of US Inflation: A Model-Combination Approach,”*** with Edward Knotek II (2021), *International Journal of Forecasting*, 39: 1736-1760  
<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 <https://doi.org/10.1016/j.ijforecast.2019.04.024>

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

***“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  
<https://doi.org/10.1016/j.ijforecast.2016.10.004>

**“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>

### **Handbook Chapters**

**“Nowcasting Inflation”** with Edward Knotek II, in: Ascari, G., and Trezzi, R. (eds.), *Research Handbook of Inflation*, Cheltenham, UK: Edward Elgar, 2024, forthcoming [[working paper link](#)]

### **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 [available](#) 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**

***“Oil Price Fluctuations and US Banks”*** with Paolo Gelain and Marco Lorusso, Federal Reserve Bank of Cleveland working paper 24-11. [[link](#)] [Under Review]

***“The Effect of Component Disaggregation on Measures of the Median and Trimmed-Mean CPI”*** with Christian Garciga and Randal Verbrugge, Federal Reserve Bank of Cleveland working paper 24-02. [[link](#)] [Under Revision]

***“The Distributional Predictive Content of Measures of Inflation Expectations”*** with James Mitchell, Federal Reserve Bank of Cleveland working paper 23-31. [[link](#)] [Under Revision]

***“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**

***“Nowcasting Inflation: The Usefulness of Regional Fed Bank Surveys”*** with Christian Garciga and Edward Knotek II

***“New Model of Trend Inflation Using Disaggregates, Survey Expectations, and Uncertainty”*** with Ellis Tallman

***“Asymmetric News Coverage of Energy Price Fluctuations”*** with Edward Knotek II

### **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

[“Does Nonfarm Payroll Growth Improve the Taylor Rule?”](#) (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**

2025: ASSA/AEA meetings (*scheduled*)

2024: ASSA/AEA meetings, International Association of Applied Econometrics Annual Conference, 44<sup>th</sup> International Symposium of Forecasting, NBER Summer Institute, Joint Statistical Meetings, Federal Reserve System Regional Meetings Day-Ahead Workshop, Macroeconomic Forecasting (MacroFor) Seminar – International Institute of Forecasters

2023: Swiss National Bank Research Conference; Real-Time Data Analysis, Methods and Applications Conference organized by Bank of Spain; Midwest Econometrics Group (MEG) Conference organized by Cleveland Fed; Computational Finance and Econometrics Annual Conference (virtual)

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: *"Pandemic Priors,"* by Danilo Cascildi-Garcia (Federal Reserve Board). Federal Reserve System Econometrics Meetings.

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:* Inflation Measurement, Nowcasting, and Macroeconomic Stars. Undergraduate Course: Inflation and Monetary Policy. Brandeis University, Boston, October 2024

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

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

## **Professional Development**

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

*Federal Reserve Bank of New York:* 41<sup>st</sup> 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:*** *The Review of Economics and Statistics; 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; Economic Letters; Empirical Economics; Economic Modeling; Economia; Journal of Business Cycle Research; Journal of Economic Studies; Open Economies Review; Oxford Open Economics; Contemporary Economics; International Review of Financial Analysis, Portuguese Economic Journal*

***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 ([link](#)). Program Committee member for the 2022 annual conference of the Society for*

*Economic Measurement ([link](#)). Scientific Program Committee member for the 17<sup>th</sup> International Conference of the Computational and Financial Econometrics ([link](#)). Scientific Program Committee member and local organizer of the 2023 Meeting of the Midwest Econometrics Group ([link](#)).*

### **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](mailto: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](mailto:todd.clark@clev.frb.org) Phone: (216) 579-2015)  
Senior Vice President, Federal Reserve Bank of Cleveland, US

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Research Director, Senior Vice President, Federal Reserve Bank of Cleveland, US

Gary Koop (Email: [gary.koop@strath.ac.uk](mailto:gary.koop@strath.ac.uk))  
Professor, Department of Economics, University of Strathclyde, Glasgow, UK

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

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Professor, Economics department University of California Santa Barbara, US

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Executive Vice President, Federal Reserve Bank of Cleveland, US