CURRICULUM VITAE

Todd E. Clark

ADDRESS: Economic Research Department
Federal Reserve Bank of Cleveland
P.O. Box 6387
Cleveland, OH 44101

TELEPHONE: (216) 579-2015

EMAIL ADDRESS: todd.clark@researchfed.org

FIELDS: Econometrics, Macroeconomics

DEGREES

Ph.D., Economics, University of Michigan, 1992

M.A., Economics, University of Michigan, 1988

A.B., *Summa Cum Laude*, Economics and Mathematics, Wabash College, 1985

POSITIONS HELD

Senior Vice President and Economist, Macroeconomic Policy, Federal Reserve Bank of Cleveland, July 2017-present

Vice President and Economist, Macroeconomic Policy, Federal Reserve Bank of Cleveland, December 2010-June 2017

Vice President and Economist, Federal Reserve Bank of Kansas City, July 2003-December 2010

Assistant Vice President and Economist, Federal Reserve Bank of Kansas City, February 1999-July 2003

Senior Economist, Federal Reserve Bank of Kansas City, January 1996-February 1999

Economist, Federal Reserve Bank of Kansas City, September 1992-December 1995

Lecturer, University of Michigan, September 1991-May 1992

JOURNAL AND BOOK PUBLICATIONS

"Investigating Growth at Risk Using a Multi-Country Non-Parametric Quantile Factor Model." With Florian Huber, Gary Koop, Massimiliano Marcellino, and Michael Pfarrhofer. *Journal of Business and Economic Statistics*, forthcoming.

"Forecasting US Inflation Using Bayesian Nonparametric Models." With Florian Huber, Gary Koop, and Massimiliano Marcellino. *Annals of Applied Statistics*, forthcoming.

"Capturing Macroeconomic Tail Risks with Bayesian Vector Autoregressions." With Andrea Carriero and Massimiliano Marcellino. *Journal of Money, Credit, and Banking*, forthcoming.

"Addressing COVID-19 Outliers in BVARs with Stochastic Volatility." With Andrea Carriero, Massimiliano Marcellino, and Elmar Mertens. *Review of Economics and Statistics*, forthcoming.

"Tail Forecasting with Multivariate Bayesian Additive Regression Trees." With Florian Huber, Gary Koop, Massimiliano Marcellino, and Michael Pfarrhofer. *International Economic Review*, 2023, 64(3), 979-1022.

"Macroeconomic Forecasting in a Multi-Country Context." With Yu Bai, Andrea Carriero, and Massimiliano Marcellino. *Journal of Applied Econometrics*, 2022, 37(6): 1230-1255.

"Nowcasting Tail Risks to Economic Activity at a Weekly Frequency." With Andrea Carriero and Massimiliano Marcellino. *Journal of Applied Econometrics*, 2022, 37(5): 843-866.

"Corrigendum to 'Large Bayesian Vector Autoregressions with Stochastic Volatility and Non-Conjugate Priors.'" With Andrea Carriero and Massimiliano Marcellino. *Journal of Econometrics*, 2022, 227(2): 506-512.

"Using Time-Varying Volatility for Identification in Vector Autoregressions: Endogenous Uncertainty." With Andrea Carriero and Massimiliano Marcellino. *Journal of Econometrics*, 2021, 225(1): 47-73.

"No Arbitrage Priors, Drifting Volatilities, and the Term Structure of Interest Rates." With Andrea Carriero and Massimiliano Marcellino. *Journal of Applied Econometrics*, 2021, 36(5): 495-516.

"Assessing International Commonality in Macroeconomic Uncertainty and Its Effects." With Andrea Carriero and Massimiliano Marcellino. *Journal of Applied Econometrics*, 2020, 35(3): 273-293.

"Modeling Time-Varying Uncertainty of Multiple-Horizon Forecast Errors." With

Michael W. McCracken and Elmar Mertens. *Review of Economics and Statistics*, 2020, 102(1): 17–33.

"Large Bayesian Vector Autoregressions with Stochastic Volatility and Non-Conjugate Priors." With Andrea Carriero and Massimiliano Marcellino. *Journal of Econometrics*, 2019, 212(1): 137-154.

"Measuring Uncertainty and Its Impact on the Economy." With Andrea Carriero and Massimiliano Marcellino. *The Review of Economics and Statistics*, 2018, 100(5): 799–815.

"A New Model of Inflation, Trend Inflation, and Long-Run Inflation Expectations." With Joshua Chan and Gary Koop. *Journal of Money, Credit, and Banking*, 2018, 50(1): 5-53.

"Have Standard VARs Remained Stable Since the Crisis?" With Knut Are Aastveit, Andrea Carriero, and Massimiliano Marcellino. *Journal of Applied Econometrics*, 2017, 32(5): 931-951.

"Using Entropic Tilting to Combine BVAR Forecasts with External Nowcasts." With Fabian Krueger and Francesco Ravazzolo. *Journal of Business and Economic Statistics*, 2017, 35(3): 470-485.

"Tests of Predictive Ability for Vector Autoregressions Used for Conditional Forecasting." With Michael W. McCracken. *Journal of Applied Econometrics*, 2017, 32(3): 533-553.

"Common Drifting Volatility in Large Bayesian VARs." With Andrea Carriero and Massimiliano Marcellino. *Journal of Business and Economic Statistics*, 2016, 34(3): 375-390.

"Real-Time Nowcasting with a Bayesian Mixed Frequency Model with Stochastic Volatility." With Andrea Carriero and Massimiliano Marcellino. *Journal of the Royal Statistical Society, Series A*, 2015, 178(4): 837-862.

"Nested Forecast Model Comparisons: A New Approach to Testing Equal Accuracy." With Michael W. McCracken. *Journal of Econometrics*, 2015, 186(1): 160-177.

"Macroeconomic Forecasting Performance Under Alternative Specifications of Time-Varying Volatility." With Francesco Ravazzolo. *Journal of Applied Econometrics*, 2015, 30(4): 551-575.

"Bayesian VARs: Specification Choices and Forecast Accuracy." With Andrea Carriero and Massimiliano Marcellino. *Journal of Applied Econometrics*, 2015, 30(1): 46-73.

"Evaluating Alternative Models of Trend Inflation." With Taeyoung Doh. *International Journal of Forecasting*, 2014, 30(3): 426-448.

"Tests of Equal Forecast Accuracy for Overlapping Models." With Michael W. McCracken. *Journal of Applied Econometrics*, 2014, 29(3): 415-430.

"Evaluating the Accuracy of Forecasts from Vector Autoregressions." With Michael W. McCracken. In *Advances in Econometrics: VAR models in Macroeconomics, Financial Econometrics, and Forecasting – New Developments and Applications*, Emerald Publishing, 2013: 117-168.

"Advances in Forecast Evaluation." With Michael W. McCracken. In *Handbook of Economic Forecasting*, volume 2 (North Holland), 2013: 1107-1201.

"In-Sample Tests of Predictive Ability: A New Approach." With Michael W. McCracken. *Journal of Econometrics*, 2012, 170(1): 1-14.

"Reality Checks and Comparisons of Nested Predictive Models." With Michael W. McCracken. *Journal of Business and Economic Statistics*, 2012, 30(1): 53-66.

"Decomposing the Declining Volatility of Long-Term Inflation Expectations." With Troy Davig. *Journal of Economic Dynamics and Control*, 2011, 35(7): 981-999.

"Real-Time Density Forecasts from VARs with Stochastic Volatility." *Journal of Business and Economic Statistics*, 2011, 29(3): 327-341.

"Time Variation in the Inflation Passthrough of Energy Prices." With Stephen J. Terry. *Journal of Money, Credit, and Banking*, 2010, 42(7): 1419-1433.

"Testing for Unconditional Predictive Ability." With Michael W. McCracken. In *Oxford Handbook on Economic Forecasting*, D. Hendry and M. Clements, eds., Oxford University Press, 2011: 415-440.

"Averaging Forecasts from VARs with Uncertain Instabilities." With Michael W. McCracken. *Journal of Applied Econometrics*, 2010, 25(1): 5-29.

"Tests of Equal Predictive Ability with Real-Time Data." With Michael W. McCracken. *Journal of Business and Economic Statistics*, 2009, 27(4): 441-454.

.

"Combining Forecasts from Nested Models." With Michael W. McCracken. *Oxford Bulletin of Economics and Statistics*, 2009, 71(3): 303-329.

"Improving Forecast Accuracy by Combining Recursive and Rolling Forecasts." With Michael W. McCracken. *International Economic Review*, 2009, 50(2): 363-395.

"Forecasting with Small Macroeconomic VARs in the Presence of Instabilities." With Michael W. McCracken. In *Forecasting in the Presence of Structural Breaks and Model Uncertainty*, D. Rapach and M. Wohar, eds., Emerald Publishing, 2008: 93-147

"Approximately Normal Tests for Equal Predictive Accuracy in Nested Models." With Kenneth D. West. *Journal of Econometrics*, 2007, 138(1): 291-311.

"Using Out-of-Sample Mean Squared Prediction Errors to Test the Martingale Difference Hypothesis." With Kenneth D. West. *Journal of Econometrics*, 2006, 135(1-2): 155-186.

"Disaggregate Evidence on the Persistence of Consumer Price Inflation." *Journal of Applied Econometrics*, 2006, 21(5): 563-587.

"The Predictive Content of the Output Gap for Inflation: Resolving In-Sample and Out-of-Sample Evidence." With Michael W. McCracken. *Journal of Money, Credit, and Banking*, 2006, 38(5): 1127-1148.

"Estimating Equilibrium Real Interest Rates in Real Time." With Sharon Kozicki. *North American Journal of Economics and Finance*, 2005, 16(3): 395-413.

"Evaluating Direct Multistep Forecasts." With Michael W. McCracken. *Econometric Reviews*, 2005, 24(4): 369-404.

"The Power of Tests of Predictive Ability in the Presence of Structural Breaks." With Michael W. McCracken. *Journal of Econometrics*, 2005, 124(1): 1-31.

"Can Out-of-Sample Forecast Comparisons Help Prevent Overfitting?" *Journal of Forecasting*, 2004, 23(2): 115-139.

"Tests of Equal Forecast Accuracy and Encompassing for Nested Models." With Michael W. McCracken. *Journal of Econometrics*, 2001, 105(1): 85-110.

"Borders and Business Cycles." With Eric van Wincoop. *Journal of International Economics*, 2001, 55(1): 59-85.

"The Sources of Fluctuations Within and Across Countries." With Kwanho Shin. In *Intranational Macroeconomics*, G. Hess and E. van Wincoop, eds., Cambridge University Press, 2000: 189-217.

"Forecasting An Aggregate of Cointegrated Disaggregates." *Journal of Forecasting*, 2000, 19(1): 1-21.

"Finite-Sample Properties of Tests of Equal Forecast Accuracy." *Journal of Forecasting*, 1999, 18(7): 489-504.

"The Responses of Prices at Different Stages of Production to Monetary Policy Shocks." *The Review of Economics and Statistics*, 1999, 81(3): 420-433.

"Employment Fluctuations in U.S. Regions and Industries: The Roles of National, Region-Specific, and Industry-Specific Shocks." *Journal of Labor Economics*, 1998, 16(1): 202-229.

"Cross-Country Evidence on Long-Run Growth and Inflation." *Economic Inquiry*, 1997, 35(1): 70-81.

"Small Sample Properties of Estimators of Non-Linear Models of Covariance Structure." *Journal of Business and Economic Statistics*, 1996, 14(3): 367-373.

"Rents and Prices of Housing Across Areas of the U.S.: A Cross-Section Examination of the Present Value Model." *Regional Science and Urban Economics*, 1995, 25(2): 237-247.

OTHER PEER-REVIEWED PUBLICATIONS

"Stochastic Volatility in Bayesian Vector Autoregressions." With Elmar Mertens. *Oxford Research Encyclopedia of Economics and Finance*, 2023 (published September 20).

"Survey Expectations and Forecast Uncertainty." With Elmar Mertens. *Handbook of Research Methods and Applications on Macroeconomic Forecasting* (eds. Mike Clements and Ana Galvao), forthcoming. Edward Elgar Publishing Ltd.

UNPUBLISHED WORKING PAPERS

"Forecasting Core Inflation and Its Goods, Housing, and Supercore Components." With Matthew V. Gordon and Saeed Zaman. Working Paper No. 23-34, Federal Reserve Bank of Cleveland.

"What Is the Predictive Value of SPF Point and Density Forecasts?" With Gergely Ganics and Elmar Mertens. Working Paper No. 22-37, Federal Reserve Bank of Cleveland.

"Constructing Fan Charts from the Ragged Edge of SPF Forecasts." With Gergely Ganics and Elmar Mertens. Working Paper No. 22-36, Federal Reserve Bank of Cleveland.

"Specification Choices in Quantile Regression for Empirical Macroeconomics." With Andrea Carriero and Massimiliano Marcellino. Working Paper No. 22-25, Federal Reserve Bank of Cleveland.

"Forecasting with Shadow-Rate VARs." With Andrea Carriero, Elmar Mertens, and Massimiliano Marcellino. Working Paper No. 21-09, Federal Reserve Bank of Cleveland.

"Measuring Uncertainty and Its Effects in the COVID-19 Era." With Andrea Carriero, Elmar Mertens, and Massimiliano Marcellino. Working Paper No. 20-32, Federal Reserve Bank of Cleveland.

"An Empirical Assessment of the Relationships Among Inflation and Short- and Long-Term Expectations." With Troy Davig. Research Working Paper 08-05, Federal Reserve Bank of Kansas City.

FEDERAL RESERVE PUBLICATIONS

"The Impacts of Supply Chain Disruptions on Inflation." With Matthew V. Gordon, *Economic Commentary* 2023-08, Federal Reserve Bank of Cleveland.

"Credit Market Frictions, Business Cycles, and Monetary Policy: The Research Contributions of Charles Carlstrom and Timothy Fuerst." With Matthius Paustian and Eric Sims, *Economic Commentary* 2020-07, Federal Reserve Bank of Cleveland.

"Measuring Inflation Forecast Uncertainty." With Edward Knotek and Saeed Zaman, *Economic Commentary* 2015-03, Federal Reserve Bank of Cleveland.

"The Importance of Trend Inflation in the Search for Missing Disinflation," *Economic Commentary* 2014-16, Federal Reserve Bank of Cleveland.

"Forecasting Implications of the Recent Decline in Inflation." With Saeed Zaman, *Economic Commentary* 2013-15, Federal Reserve Bank of Cleveland.

"Policy Rules in Macroeconomic Forecasting Models," *Economic Commentary* 2012-16, Federal Reserve Bank of Cleveland.

"Food and Energy Price Shocks: What Other Prices Are Affected?" with Saeed Zaman, *Economic Commentary* 2011-14, Federal Reserve Bank of Cleveland.

"Is the Great Moderation Over? An Empirical Analysis," *Economic Review*, Federal Reserve Bank of Kansas City, Fourth Quarter 2009.

"Has the Behavior of Inflation and Long-Term Inflation Expectations Changed?" with Taisuke Nakata, *Economic Review*, Federal Reserve Bank of Kansas City, First Quarter 2008.

"The Trend Growth Rate of Employment: Past, Present, and Future." With Taisuke Nakata, *Economic Review*, Federal Reserve Bank of Kansas City, First Quarter 2006.

"An Evaluation of the Decline in Goods Inflation," *Economic Review*, Federal Reserve Bank of Kansas City, Second Quarter 2004.

"Comparing Measures of Core Inflation," *Economic Review*, Federal Reserve Bank of Kansas City, Second Quarter 2001.

"A Comparison of the CPI and the PCE Price Index," *Economic Review*, Federal Reserve Bank of Kansas City, Third Quarter 1999.

"Progress Toward Price Stability: A 1997 Inflation Report," *Economic Review*, Federal Reserve Bank of Kansas City, First Quarter 1998.

"U.S. Inflation Developments in 1996," *Economic Review*, Federal Reserve Bank of Kansas City, First Quarter 1997.

"Sources of New York Employment Fluctuations: Commentary," *Economic Policy Review*, Federal Reserve Bank of New York, February 1997.

"U.S. Inflation Developments in 1995," *Economic Review*, Federal Reserve Bank of Kansas City, First Quarter 1996.

"Do Producer Prices Lead Consumer Prices?" *Economic Review*, Federal Reserve Bank of Kansas City, Third Quarter 1995.

"Nominal GDP Targeting Rules: Can They Stabilize the Economy?" *Economic Review*, Federal Reserve Bank of Kansas City, Third Quarter 1994.

SELECTED FEDERAL RESERVE EXPERIENCE

2007-present: Head of macroeconomics group

2008-present: Periodic attendance of FOMC meetings and regular contributions to the preparation of associated materials for the Bank's president

2007-present: Numerous macroeconomics presentations to the Bank's Board of Directors and public audiences

2008-present: Contributed to the development of a range of statistical forecasting models for the U.S. economy, for regular use at the Bank

TEACHING EXPERIENCE

Intermediate Macroeconomics, Winter 1992, University of Michigan

Monetary and Financial Theory, Fall 1991, University of Michigan

OTHER PROFESSIONAL ACTIVITIES

Fellow, International Association of Applied Econometrics, November 2019-present

Program co-chair, 2019 annual meeting of the International Association of Applied Econometrics

Co-Editor, *Journal of Business and Economic Statistics*, January 2016-December 2018

Associate Editor, *Journal of Money, Credit, and Banking*, August 2002-present; *Journal of Business and Economic Statistics*, September 2011-December 2015

Reviewer for the National Science Foundation

Referee for: *American Economic Review*, *American Economic Review: Insights*, *American Economic Journal: Macroeconomics, B.E. Journals in Macroeconomics*, *Critical Finance Review*, *Econometric Theory*, *Econometrics Journal*, *Economic Geography*, *Economic Inquiry*, *Economic Modelling, FRBNY Economic Policy Review, IMF Staff Papers*, *International Economic Review, International Journal of Central Banking*, *International Journal of Forecasting*, *Journal of Applied Econometrics*, *Journal of Business and Economic Statistics*, *Journal of Computational and Graphical Statistics, Journal of Development Economics*, *Journal of Econometrics*, *Journal of Economic Dynamics and Control*, *Journal of Economic Growth*, *Journal of Economic Literature, Journal of Financial Econometrics*, *Journal of Forecasting*, *Journal of International Economics*, *Journal of International Money and Finance*, *Journal of Macroeconomics*, *Journal of Money, Credit, and Banking*, *Journal of Monetary Economics, Journal of the European Economic Association*, *Oxford Bulletin of Economics and Statistics, Oxford Economic Papers, Quantitative Economics, Review of Economics and Statistics, Review of Economic Studies*

Member of the American Economics Association, Econometric Society, and Phi Beta Kappa