

# ALEXANDER L. WOLMAN

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## **EMPLOYMENT HISTORY:**

2012-present	Vice President for Monetary and Macroeconomic Research Federal Reserve Bank of Richmond
2011-2012	Senior Economist and Research Advisor Federal Reserve Bank of Richmond
2002-2011	Senior Economist Federal Reserve Bank of Richmond
1996-2002	Economist Federal Reserve Bank of Richmond
1989-1991	Research Assistant Federal Reserve Bank of Richmond
1988-1989	Research Analyst Minnesota Department of Revenue, Tax Research Division

## **TEACHING EXPERIENCE:**

University of Richmond, Undergraduate Mathematical Economics, Spring 2012, Spring 2013  
University of Virginia, Graduate Monetary Economics, Fall 1999

## **OTHER PROFESSIONAL EXPERIENCE:**

January 2009 – April 2009	Visiting Researcher, Deutsche Bundesbank
May 2009 – June 2009	Visiting Researcher, European Central Bank

## **EDUCATION:**

- Ph.D., Economics, 1996      University of Virginia  
Dissertation Committee: Robert G. King (principal advisor),  
B. Ravikumar, Aubhik Khan, Robert I. Webb
- M.A., Economics, 1993      University of Virginia
- B.A., Economics, 1988      Carleton College, Northfield, MN

## **PUBLICATIONS:**

### • ARTICLES IN ACADEMIC JOURNALS:

“Investigating Non-neutrality in a State-Dependent Pricing Model with Firm-level Productivity Shocks,” *International Economic Review* 61, February 2020, 159–188 (with Michael Dotsey).

“Discretionary Monetary Policy in the Calvo Model,” *Quantitative Economics* 10, January 2019, 387–418 (with Willem Van Zandweghe).

“Payment Choice and Currency Use: Insights from Two Billion Retail Transactions,” *Journal of Monetary Economics* 84, December 2016, 94-115 (with Zhu Wang).

Discussion of ‘Inflation Targeting: A Victim of its Own Success’, by Christian Gillitzer and John Simon, *International Journal of Central Banking* 11, September 2015, 289-293.

“Large Excess Reserves in the U.S.: A View from the Cross Section of Banks,” *International Journal of Central Banking* 11, January 2015, 251-289 (with Huberto M. Ennis).

“The Optimal Rate of Inflation with Trending Relative Prices,” *Journal of Money, Credit and Banking* 43, March-April 2011, 355-384.

“Steady-State Equilibrium with State-Dependent Pricing,” *Journal of Monetary Economics* 55, March 2008, 383-405 (with A. Andrew John).

“Fiscal Policy and Regional Inflation in a Currency Union,” *Journal of International Economics* 74, March 2008, 384-401 (with Margarida Duarte).

“The Frequency and Costs of Individual Price Adjustment,” *Managerial and Decision Economics* 28, September 2007, 531-552.

Discussion of ‘Reconsidering the natural rate hypothesis in a new Keynesian framework,’ by Andrew Levin and Tack Yun, *Journal of Monetary Economics* 54, July 2007, 1366-1371.

“The Zero Bound and the Term Structure in a Nonlinear Economic Model,” *Seoul Journal of Economics* 19, Spring 2006, 147-170.

“Real Implications of the Zero Bound on Nominal Interest Rates,” *Journal of Money, Credit and Banking* 37, April 2005, 273-296.

“Monetary Discretion, Pricing Complementarity and Dynamic Multiple Equilibria,” *Quarterly Journal of Economics* 119, November 2004, 1513-1553 (with Robert G. King).

“Optimal Monetary Policy,” *Review of Economic Studies* 70, October 2003, 825-860 (with Aubhik Khan and Robert G. King).

“State-Dependent Pricing and the General Equilibrium Dynamics of Money and Output,” *Quarterly Journal of Economics* 114, May 1999, 655-690 (with Michael Dotsey and Robert G. King).

- FEDERAL RESERVE PUBLICATIONS (PRINT AND ONLINE):

“A Small Contribution to Measuring the Lags in Monetary Policy Transmission,” *Economic Brief* 23-30, Federal Reserve Bank of Richmond, September 2023.

“Is PCE Inflation Back on Track?” *Macro Minute* blog post, Federal Reserve Bank of Richmond, August 29, 2023.

“Detecting Inflation Instability,” *Economic Brief* 23-11, Federal Reserve Bank of Richmond, April 2023.

“Anticipated FOMC Policy, Inflation and Credibility,” *Economic Brief* 22-37, Federal Reserve Bank of Richmond, September 2022.

“The 2021 Rise in U.S. Inflation: A Cross-Country Perspective,” *Macro Minute* blog post, Federal Reserve Bank of Richmond, August 23, 2022 (with Thomas A. Lubik).

“Relative Price Changes Are Unlikely to Account for Recent High Inflation,” *Economic Brief* 22-10, Federal Reserve Bank of Richmond, March 2022.

“How Broad-Based Is the Recent High Inflation?” *Economic Brief* 21-30, Federal Reserve Bank of Richmond, September 2021.

“What Does the FOMC's Shift in Fed Funds Rate Target Language Mean?” *Economic Brief* 21-22, Federal Reserve Bank of Richmond, July 2021.

“Have Yield Curve Inversions Become More Likely?” *Economic Brief* 18-12, Federal Reserve Bank of Richmond, December 2018 (with Renee Haltom and Elaine Wissuchek).

“The Decline in Currency Use at a National Retail Chain,” *Federal Reserve Bank of Richmond Economic Quarterly* 104, Second Quarter 2018, 53-77 (with Zhu Wang).

“What Two Billion Retail Transactions Reveal about Consumers’ Choice of Payments,” *Economic Brief* 17-04, Federal Reserve Bank of Richmond, April 2017 (with David A. Price and Zhu Wang).

“How Did Short-Term Market Rates React to Liftoff?” *Economic Brief* 16-09, Federal Reserve Bank of Richmond, September 2016 (with Renee Haltom).

“Relative Price Changes and the Optimal Inflation Rate,” *Federal Reserve Bank of Richmond Economic Quarterly* 101, Third Quarter 2015, 245-274.

“Federal Reserve Interdistrict Settlement,” *Federal Reserve Bank of Richmond Economic Quarterly* 99, Second Quarter 2013, 117-141.

“A Citizen’s Guide to Unconventional Monetary Policy,” *Economic Brief* 12-12, Federal Reserve Bank of Richmond, December 2012 (with Renee Haltom).

“K-Core Inflation,” *Federal Reserve Bank of Richmond Economic Quarterly* 97, Fourth Quarter 2011, 415-430.

“Excess Reserves and the New Challenges for Monetary Policy,” *Economic Brief* 10-03, Federal Reserve Bank of Richmond, March 2010 (with Huberto M. Ennis).

“Monetary Policy and Global Equilibria in a Production Economy,” *Federal Reserve Bank of Richmond Economic Quarterly* 96, Fourth Quarter 2010, 317-337 (with Tim Hursey).

“Nominal Frictions, Relative Price Adjustment, and the Limits to Monetary Policy,” *Federal Reserve Bank of Richmond Economic Quarterly* 94, Summer 2008, 219-233.

“Currency Quality and Changes in the Behavior of Depository Institutions,” *Federal Reserve Bank of Richmond Economic Quarterly* 93, Fall 2007, 361-391 (with Hubert P. Janicki, Nashat F. Moin, and Andrea L. Waddle).

“Bond Price Premiums,” *Federal Reserve Bank of Richmond Economic Quarterly* 92, Fall 2006, 317-336.

“Trend Inflation, Firm-specific Capital, and Sticky Prices,” *Federal Reserve Bank of Richmond Economic Quarterly* 91, Fall 2005, 57-83 (with Andreas Hornstein).

“Inflation and Changing Expenditure Shares,” *Federal Reserve Bank of Richmond Economic Quarterly* 91, Winter 2005, 1-20 (with Fan Ding).

“Boom and Bust in Telecommunications,” *Federal Reserve Bank of Richmond Economic Quarterly* 89, Fall 2003, 1-24 (with Elise A. Couper and John P. Hejkal).

“Potential Consequences of Linear Approximation in Economics,” *Federal Reserve Bank of Richmond Economic Quarterly* 89, Winter 2003, 51-68 (with Elise A. Couper).

“A Primer on Optimal Monetary Policy with Staggered Price-Setting,” *Federal Reserve Bank of Richmond Economic Quarterly* 87, Fall 2001, 27-52.

“The Frequency and Costs of Individual Price Adjustment,” *Federal Reserve Bank of Richmond Economic Quarterly* 86, Fall 2000, 1-22.

“Sticky Prices, Marginal Cost, and the Behavior of Inflation,” *Federal Reserve Bank of Richmond Economic Quarterly* 85, Fall 1999, 29-48.

“Staggered Price Setting and the Zero Bound on Nominal Interest Rates,” *Federal Reserve Bank of Richmond Economic Quarterly* 84, Fall 1998, 1-24.

“Zero Inflation and the Friedman Rule: A Welfare Comparison,” *Federal Reserve Bank of Richmond Economic Quarterly* 83, Fall 1997, 1-22.

“Inflation Targeting in a St. Louis Model of the 21st Century,” *Federal Reserve Bank of St. Louis Review* 78, May/June 1996, 83-107 (with Robert G. King).

• **OTHER PUBLICATIONS:**

“Interest Rate Smoothing,” in *Essays in Honor of Marvin Goodfriend*, Robert G. King and Alexander L. Wolman eds., Federal Reserve Bank of Richmond, 2022, 129-141 (with Michael Dotsey and Andreas Hornstein).

“What Should the Monetary Authority Do When Prices Are Sticky?” in *Monetary Policy Rules*, John B. Taylor ed., University of Chicago Press: Chicago, 1999, 349-398 (with Robert G. King).

**WORK IN PROGRESS AND UNPUBLISHED PAPERS:**

“Discretionary Monetary Policy with Fluctuating Relative Prices,” work in progress, November 2023 (with Willem Van Zandweghe).

“The Diffusion of Bank Reserves in the U.S.,” work in progress, November 2023 (with Huberto M. Ennis).

“The Relationship Between Inflation and the Distribution of Relative Price Changes,” work in progress, November 2023 (with Andreas Hornstein and Francisco Ruge-Murcia).

“Relative Price Shocks and Inflation,” Federal Reserve Bank of Richmond Working paper 22-07, June 2022 (with Francisco Ruge-Murcia).

“Monetary Policy and Global Equilibria in an Economy with Capital,” dormant manuscript, 2015 (with Andreas Hornstein and Tim Hursey).

“Synchronization and Staggering in a Model of State-Dependent Pricing,” dormant manuscript, June 2005 (with A. Andrew John).

"Heterogeneous Frequency of Price Adjustment" (with A. Andrew John), dormant manuscript, September 2003.

“The Pitfalls of Monetary Discretion,” dormant manuscript, Federal Reserve Bank of Richmond Working paper 01-8, October 2001 (with Aubhik Khan and Robert G. King).

“Menu Costs, Staggered Price Setting, and Elastic Factor Supply,” dormant manuscript, June 1997 (with Michael Dotsey and Robert G. King).

“Liquidity Effects from Permanent/Transitory Confusion,” dormant manuscript, January 1997.

### **INVITED SEMINARS:**

- 2023 Federal Reserve Bank of Cleveland, Deutsche Bundesbank, Bank for International Settlements
- 2019 Deutsche Bundesbank
- 2015 Banco de Mexico, Keio University, University of Tokyo, Kyoto University
- 2014 Reserve Bank of New Zealand
- 2011 Sveriges Riksbank, Federal Reserve Bank of New York, Federal Reserve Board, University of Erlangen-Nuremberg, University of Wuerzburg
- 2010 Deutsche Bundesbank
- 2009 Deutsche Bundesbank, National Bank of Belgium, Carlos III University (Madrid), Humboldt University (Berlin), Norges Bank, Goethe University (Frankfurt), Banque de France, European Central Bank, LMU University (Munich).
- 2008 Federal Reserve Board, Federal Reserve Bank of Kansas City
- 2006 Duke University, Federal Reserve Banks of Atlanta and New York
- 2005 Federal Reserve Board, University of Tokyo, Bank of Japan, University of Delaware, University of Richmond
- 2004 Bank for International Settlements, Bank of Canada, University of Alicante
- 2003 Bocconi University, National Bank of Hungary, University of British Columbia
- 2002 University of Iowa, Federal Reserve Bank of New York, Wharton Business School, York University, University of Western Ontario, University of Quebec-Montreal
- 2001 European Central Bank, Federal Reserve Board
- 2000 Bank of Portugal, George Washington University
- 1999 University of Virginia

- 1998 Federal Reserve Board, Princeton University, Rutgers University, University of Virginia
- 1997 College of William and Mary, University of Maryland
- 1996 Federal Reserve Bank of Richmond, University of Pittsburgh, McMaster University, Federal Reserve Board

### **CONFERENCE PRESENTATIONS:**

- Inflation Strikes Back: 25<sup>th</sup> Annual Research Conference of the Dutch Central Bank. Amsterdam, November 2022.
- Banknote Equipment Manufacturer Conference. Frankfurt (ECB), November 2019.
- ECB/Bank of Finland Retail Payments Conference. Helsinki, June 2015.
- International Banking, Economics and Finance Association Meeting. Denver, June 2014.
- North American Summer Meeting of the Econometric Society. Minneapolis, June 2014
- Boston Fed Payments Conference. April 2014
- ECB Conference on the Implementation of Monetary Policy. Frankfurt, October 2011.
- Swiss National Bank Monetary Policy Conference. September 2011.
- Canadian Economics Association. Vancouver, June 2008.
- Computing in Economics and Finance. Montreal, Canada, June 2007.
- The Phillips Curve & the Natural Rate of Unemployment. Kiel, Germany, June 2007.
- Practical Issues in DSGE Modelling at Central Banks. Bank of Finland, June 2006.
- The 13th SJE-KERI-KIF International Symposium: Regime Shifts in Macroeconomy and Monetary Policy. Seoul National University, Korea, September 2005.
- Computing in Economics and Finance, Conference of the Society for Computational Economics. Washington DC, June 2005.
- Monetary Multi-Sector Models. University of Montreal, May 2005.
- International Research Forum on Monetary Policy. Federal Reserve Board, Washington DC, November 2003.
- Microeconomic Pricing and the Macroeconomy. Central European University, Budapest, October 2003.
- Dynamic Models Useful for Policy Analysis. Bank of Canada, Ottawa, July 2003.
- Midwest Macroeconomics Conference. Chicago, May 2003.
- NBER Summer Institute. July 2001.
- North American Summer Meeting of the Econometric Society. College Park, MD, June 2001.
- ASSA Meetings (session organized by the SED). New Orleans, January 2001.
- ASSA Meetings (session organized by AEA). Boston, January 2000.
- NBER Summer Institute, July 1999.
- Computing in Economics and Finance, Conference of the Society for Computational Economics. Boston, June 1999.
- NBER Universities Research Conference on the Formulation of Monetary Policy. Cambridge, MA, December 1998.

- North American Summer Meeting of the Econometric Society. Montreal, June 1998.
- NBER Conference on Monetary Policy Rules. Islamorada, FL, January 1998.
- Indeterminacy and Sunspots in Macroeconomics. New York University, November 1997.
- NBER Summer Institute. July 1997.

## **CONFERENCE DISCUSSIONS:**

- “Optimal Monetary Policy with the Risk-Taking Channel,” by Angela Abbate and Dominik Thaler. Swiss National Bank Research Conference, Zurich, September 2022.
- “Monetary Policy Options in a ‘Low for Long’ Era,” by Richard Harrison, Martin Seneca and Matt Waldron. Swiss National Bank Research Conference, Zurich, September 2019.
- “Price Trends Over the Product Life Cycle and the Optimal U.K. Inflation Target,” by Klaus Adam and Henning Weber. Inflation: Drivers and Dynamics Conference, Cleveland, May 2019.
- “A Shadow Rate New Keynesian Model,” by Jing Cynthia Wu and Ji Zhang. Next Steps for Macroeconomic Modelling, Ottawa, November 2018.
- “Employment, Wages and Optimal Monetary Policy,” by Martin Bodenstein and Junzhu Zhao. CIREQ Conference on Frictions in Monetary and International Economics, Montreal, September 2018.
- “Discrete Adjustment to a Changing Environment: Experimental Evidence,” by Mel Win Khaw, Luminita Stevens, and Michael Woodford. SNB/JME Conference in Honor of Bob King. Gerzensee, Switzerland, October 2016.
- “Interest on Reserves, Interbank Lending, and Monetary Policy,” by Stephen D. Williamson. Federal Reserve System Committee Meeting on Macroeconomics. Nashville, May 2016.
- “Inflation Targeting: A Victim of its own Success,” by Christian Gillitzer and John Simon. IJCB Conference: Reflections on 25 Years of Inflation Targeting. Wellington NZ, December 2014.
- “General Purpose Reloadable Prepaid Cards: Penetration, Use, Fees and Fraud Risks,” by Fumiko Hayashi and Emily Cuddy. International Banking, Economics and Finance Association Meeting. Denver, June 2014.
- “Inflation and Output in New Keynesian Models with a Transient Interest Rate Peg,” by Chuck Carlstrom, Tim Fuerst and Matthias Paustian, Joint Central Bankers’ Conference, New Orleans, November 2012.
- “Term Structure Modeling with Supply Factors and the Federal Reserve’s Large Scale Asset Purchase Programs,” by Canlin Li and Min Wei, Swiss National Bank Research Conference, September 2012.
- “Fiscal Policy and Interest Rates: the Role of Sovereign Default Risk,” by Thomas Laubach. Swiss National Bank Conference on Monetary Policy After the Financial Crisis. Zurich, September 2010.



- “Government Debt and Optimal Monetary and Fiscal Policy,” by Klaus Adam. European Economic Review Conference on Fiscal Policy, Philadelphia, June 2010.
- “Loan Securitization and the Monetary Transmission Mechanism,” by Bart Hobijn and Federico Ravenna. Swiss National Bank Conference on Financial Markets, Liquidity and Monetary Policy. Zurich, September 2009.
- “Setting the Right Prices for the Wrong Reasons,” by Christian Hellwig and Venky Venkateswaran. Conference on Asset Markets, Nominal Contracts and Monetary Policy, Munich, June 2009.
- “Nominal and Real Wage Rigidities in Theory and in Europe,” by Markus Knell. Joint Conference of the Austrian, German and Swiss National Banks, Eltville, Germany, May 2009.
- “Insights from an Estimated Search-Based Monetary Model with Nominal Rigidities,” by Boragan Aruoba and Franck Schorfheide. Swiss National Bank Conference on Alternative Models for Monetary Policy Analysis, Zurich, September 2008.
- “Commodities and Monetary Policy: Implications for Inflation and Price Level Targeting,” by Don Colleti, Rene Lalonde, Paul Masson and Dirk Muir. Canadian Economic Association Meetings, Vancouver, June 2008.
- “Information-constrained State-Dependent Pricing,” by Michael Woodford. NY Area Monetary Economics Workshop, Federal Reserve Bank of New York, May 2008.
- “Monetary Policy and the Great Moderation,” by Klaus Adam. New Developments in Monetary Policy Design, Montreal, October 2007.
- “Equilibrium Sticky Prices,” by Robert Hall, and “Minimally Altruistic Wages and Unemployment in a Matching Model,” by Julio Rotemberg. John Taylor’s Contributions to Monetary Theory and Policy, Dallas, October 2007.
- “Trend Inflation, Wage and Price Rigidities, and Welfare,” by Robert Amano, Stephen Murchison, and Andrew Rennison. Computing in Economics and Finance, Montreal, Canada, June 2007.
- “Do Switching Costs Make Markets Less Competitive?” by JP Dube, Gunter Hitch, and Peter Rossi. Firms’ Pricing Decisions: Exchanging Insights between Industrial Organization, Marketing Science, and Macroeconomics. Chicago, December 2006.
- “Reconsidering the Natural Rate Hypothesis in a New Keynesian Model,” by Andrew Levin and Tack Yun. Carnegie Rochester Conference, Pittsburgh, November 2006.
- “Generalizing the Taylor Principle,” by Troy Davig and Eric Leeper. Federal Reserve System Committee Meeting on Macroeconomics, Baltimore, April 2006.
- “Does the Time Inconsistency Problem Make Flexible Exchange Rates Look Worse than You Think?” by Roc Armenter and Martin Bodenstein. Federal Reserve System Committee Meeting on International Economics. Washington, DC, April 2005.
- “Conditional Welfare Comparisons of Monetary Policy Rules,” by Jinill Kim and Andrew Levin. ASSA Meeting, Philadelphia, January 2005.
- “Monetary Policy, Taxes and the Business Cycle,” by William Gavin, Finn Kydland, and Michael Pakko. Federal Reserve System Committee Meeting on Macroeconomics, Cleveland, May 2004.

- “Inflation Stabilization and Welfare: The Case of a Distorted Steady State,” by Pierpaolo Benigno and Michael Woodford. ASSA Meeting, San Diego, January 2004.
- “A Structural Small Open Economy Model for Canada,” by Andrew Rennison, Stephen Murchison and Zhenhua Zhu. CIRPÉE conference on Open Macroeconomic Models and Policy Analysis, UQAM Montreal, April 2004.
- "Monetary and Fiscal Policy in a Monetary Union", by Bernardino Adão, Nuno Alves, Jose B. Brito and Isabel Correia. ECB Workshop on Monetary policy Implications of Heterogeneity in a Currency Area, Frankfurt, December 2004.
- “General Equilibrium of a Monetary Model with State-Dependent Pricing,” by Jonathan Willis. Microeconomic Pricing and the Macroeconomy, Central European University, Budapest, October 2003.
- “Chaotic Interest Rate Rules,” by Jess Benhabib, Stephanie Schmitt-Grohe, and Martin Uribe. American Economic Association Meeting, Atlanta, January 2002.
- “Economic Performance and Stabilization Policy in a Monetary Union with Imperfect Labor and Goods Markets,” by Fabrizio Coricelli, Alex Cukierman, and Alberto Dalmazzo. CEPR/INSEAD Annual Workshop in Macroeconomics, Fontainebleau, France, April 2001.
- “Robust Optimal Monetary Policy in a Forward-Looking Model with Parameter and Shock Uncertainty,” by Marc Giannoni. American Economic Association, New Orleans, January 2001.
- “Real Exchange Rate Persistence and Monetary Policy Rules,” by Gianluca Benigno. NBER Universities Research Conference: Changes in Real Exchange Rates, Causes and Consequences, Cambridge, MA, December 2000.
- “Optimal Monetary Policy and Exchange Rate Volatility in a Small Open Economy,” by Jordi Gali and Tommaso Monacelli. Banco de Portugal Conference on Monetary Economics, Guimaraens Portugal, June 2000.
- “Inflation Dynamics, a Structural Econometric Analysis,” by Jordi Gali and Mark Gertler. Conference on The Return of the Phillips Curve, Gerzensee Switzerland, October 1998.
- “Staggered Price Setting and Endogenous Persistence,” by Paul Bergin and Robert Feenstra. North American Summer Meeting of the Econometric Society, Montreal, June 1998.
- “Real Indeterminacy Under Inflation Targeting,” by Charles Carlstrom and Tim Fuerst. Federal Reserve System Committee Meeting on Macroeconomics, Chicago, May 1998.

### **PROFESSIONAL SERVICE:**

Associate Editor: *Journal of Monetary Economics*, August 2008-December 2013; *Journal of Money, Credit and Banking*, July 2005-September 2012.

Referee: *AEJ: Macro*; *American Economic Review*; *Annals of Regional Science*, *B.E. Journals in Macroeconomics*; *Bank of England Working Paper Series*; *Economic Journal*; *Economic Modelling*; *European Economic Review*; *Financial History Review*; *International Economic Review*; *International Journal of Central Banking*; *Journal of Economic Dynamics*

*and Control; Journal of Economic Theory; Journal of Economics and Business; Journal of the European Economic Association; Journal of Futures Markets; Journal of International Economics; Journal of International Money and Finance; Journal of Macroeconomics; Journal of Monetary Economics; Journal of Money, Credit and Banking; Journal of Political Economy; Macroeconomic Dynamics; Managerial and Decision Economics; MIT Press; Oxford Bulletin of Economics and Statistics; Quarterly Journal of Economics; Review of Economic Dynamics; Review of Economic Studies; Review of Economics and Statistics; Scandinavian Journal of Economics; Southern Journal of Economics; Theoretical Economics.*

Grant Proposal Reviewer: National Science Foundation

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