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Areas of Interest Monetary Theory and Policy, Macroeconomics and Econometrics

Journal Publications

"Resolving the Unbiasedness and Forward Premium Puzzles," *Scottish Journal of Political Economy*, February 2019, Vol. 66, No. 1, pp. 5-27.

"Predictions of short-term rates and the expectations hypothesis," with Massimo Guidolin, *International Journal of Forecasting*, October-December 2018, Vol. 34, No. 4, pp. 636-664.

"Effectiveness of QE: An Assessment of the Event-Study Evidence," *Journal of Macroeconomics*, June 2017, Vol. 52, pp. 56-74.

"Greenspan's Conundrum and the Fed's Ability to Affect Long-Term Yields," *Journal of Money, Credit, and Banking*, March-April 2018, Vol. 50, No. 2-3, pp. 513-43.

"Federal Reserve Mischief and the Credit Trap," *The Cato Journal*, Spring/Summer 2017, Vol. 37, No. 2, pp. 263-285.

"Understanding the Predictability of Excess Returns," *Kredit und Kapital*, December 2016, Vol. 49, No. 4, pp. 485-505.

"Guest Editor's Introduction: What Monetary Policy Can and Cannot Do," *Journal of Macroeconomics*, March 2016, Vol. 47 (Part A), pp. 1-4.

"Requiem for QE," *Cato Institute Policy Analysis*, November 2015, No. 783.

- "Monetary Policy: Why Money Matters, and Interest Rates Don't," *Journal of Macroeconomics*, June 2014, Vol. 40, pp. 202-13.
- "The Identification of the Response of Interest Rates to Monetary Policy Actions Using Market-Based Measures of Monetary Policy Shocks," *Oxford Economic Papers*, January 2014, Vol. 66, No. 1, pp. 67-87.
- "The Effect of Underreporting on LIBOR Rates," with Andrea Monticini, *Journal of Macroeconomics*, September 2013, Vol. 37, pp. 345-48.
- "Out-of-Sample Predictions of Bond Excess Returns and Forward Rates: An Asset-Allocation Perspective," with Giorgio Valente, *Review of Financial Studies*, October 2012, Vol. 25, No. 10, pp. 3141-3168.
- "The U.S. Deficit/Debt Problem: A Longer-Run Perspective," *University of Louisville Law Review*, June 2012, Vol. 50, No. 4, pp. 625-42.
- "The Phillips Curve and US Monetary Policy: What the FOMC Transcripts Tell Us," with Ellen E. Meade, *Oxford Economic Papers*, April 2012, Vol. 64, No. 2, pp. 197-216.
- "The Expectations Hypothesis of the Term Structure of Very Short-Term Rates: Statistical Tests and Economic Value," with Pasquale Della Corte and Lucio Sarno, *Journal of Financial Economics*, July 2008, Vol. 89, No. 1, pp. 158-74.
- "What's Unique About the Federal Funds Rate? Evidence From a Spectral Perspective," with Lucio Sarno and Yi Wen, *Oxford Bulletin of Economics and Statistics*, April 2007, Vol. 69, No. 2, pp. 293-319.
- "The Empirical Failure of the Expectations Hypothesis of the Term Structure of Bond Yields," with Lucio Sarno and Giorgio Valente, *Journal of Financial and Quantitative Analysis*, March 2007, Vol. 42, No. 1, pp. 81-100.
- "When Did the FOMC Begin Targeting the Federal Funds Rate? What the Verbatim Transcripts Tell Us," *Journal of Money, Credit, and Banking*, December 2006, Vol. 38, No. 8, pp. 2039-71.
- "Tests of the Expectations Hypothesis: Resolving the Campbell-Shiller Paradox," *Journal of Money, Credit, and Banking*, March 2006, Vol. 38, No. 2, pp. 511-42.
- "Test of the Expectations Hypothesis: Resolving the Anomalies When the Short-Term Rate Is the Federal Funds Rate," *Journal of Banking & Finance*, October 2005, Vol. 29, No. 10, pp. 2541-56.

"Federal Funds Rate Prediction," with Lucio Sarno and Giorgio Valente, *Journal of Money, Credit, and Banking*, June 2005, Vol. 37, No. 3, pp. 449-71.

"A Note on the Expectations Hypothesis at the Founding of the Fed," with Clemens J.M. Kool, *Journal of Banking & Finance*, December 2004, Vol. 28, No. 12, pp. 3055-68.

"Forecasting the Treasury's Balance at the Fed," *Journal of Forecasting*, August 2004, Vol. 23, No. 5, pp. 357-71.

"The Fed and Short-Term Rates: Is It Open Market Operations, Open Mouth Operations or Interest Rate Smoothing?" *Journal of Banking & Finance*, March 2004, Vol. 28, No. 3, pp. 475-98.

"Monetary Policy Transparency: Transparent About What?" *Manchester School*, September 2003, Vol. 71, No. 5, pp. 478-97.

"The Dynamic Relationship Between the Federal Funds Rate and the Treasury Bill Rate: An Empirical Investigation," with Lucio Sarno, *Journal of Banking & Finance*, June 2003, Vol. 27, No. 6, pp. 1079-1110.

"The Federal Reserve's Operating Procedure, Nonborrowed Reserves, Borrowed Reserves and the Liquidity Effect," *Journal of Banking & Finance*, September 2001, Vol. 25, No. 9, pp. 1717-39.

"Lifting the Veil of Secrecy From Monetary Policy: Evidence From the Fed's Early Discount Rate Policy," *Journal of Money, Credit, and Banking*, May 2000, Vol. 32, No. 2, pp. 155-67.

"The Information Content of Discount Rate Announcements: What Is Behind the Announcement Effect," *Journal of Banking & Finance*, January 1998, Vol. 22, No. 1, pp. 83-108.

"The Information Content of the Federal Funds Rate: Is It Unique?" with Michelle R. Garfinkel, *Journal of Money, Credit, and Banking*, August 1995, Vol. 27, No. 3, pp. 838-847.

"Why Do T-Bill Rates React to Discount Rate Changes," *Journal of Money, Credit, and Banking*, November 1994, Vol. 26, No. 4, pp. 839-50.

"Why Do Market Interest Rates Respond to Money Announcements?" *Journal of International Financial Markets, Institutions & Money*, 1991, Vol. 1, No. 1, pp. 33-60.

"Comments on 'Modeling the Demand for Money in Large Industrial Countries Buffer Stock and Error Correction Approaches' by James M. Boughton and George S. Tavlas (1990)," *Journal of Policy Modeling*, Summer 1990, Vol. 12, No. 2, pp. 463-67.

"The Effect of Unanticipated Money on the Money and Foreign Exchange Markets," *Journal of International Money and Finance*, December 1989, Vol. 8, No. 4, pp. 573-87.

"On the Informational Content of Spot and Forward Exchange Rates," with K. Alec Chrystal, *Journal of International Money and Finance*, September 1988, Vol. 7, No. 3, pp. 321-330.

"The Information Content of Discount Rate Announcements: What Is Behind the Announcement Effect," *Journal of Banking & Finance*, January 1998, Vol. 22, No. 1, pp. 83-108.

"The Federal Reserve's Operating Procedure, Nonborrowed Reserves, Borrowed Reserves and the Liquidity Effect," *Journal of Banking & Finance*, September 2001, Vol. 25, No. 9, pp. 1717-39.

"A Note on the Efficiency of the Cochrane-Orcutt Estimator of the AR(1) Regression Model," *Journal of Econometrics*, November 1987, Vol. 36, No. 3, pp. 369-76.

"Price Expectations and the Demand for Money: A Comment," with R. W. Hafer, *Review of Economics and Statistics*, August 1986, Vol. 68, No. 3, pp. 539-42.

"Monetary Anticipations and the Demand for Money: Reply to MacKinnon and Milbourne," with Jack Carr and Michael R. Darby, *Journal of Monetary Economics*, September 1985, Vol. 16, No. 2, pp. 251-257.

"The Appropriate Interest Rate and Scale Variable in Money Demand: Results from Non-Nested Tests," *Applied Economics*, August 1985, Vol. 17, No. 4, pp. 735-44.

"The Andersen-Jordan Equation, Revisited," with Dallas S. Batten, *Journal of Macroeconomics*, Summer 1985, Vol. 7, No. 3, pp. 419-32.

"Lag-Length Selection and Tests of Granger Causality Between Money and Income," with Dallas S. Batten, *Journal of Money, Credit, and Banking*, May 1985, Vol. 17, No. 2, pp. 164-78.

"A Note on Almon's Endpoint Constraints," with Dallas S. Batten, *Communications in Statistics: Simulation and Computation*, 1985, Vol. 14, No. 3, pp. 683-90.

"The Government Budget Constraint with Endogenous Money," *Journal of Macroeconomics*, Winter 1984, Vol. 6, No. 1, pp. 57-67.

"Discount Rate Changes and the Foreign Exchange Market," with Dallas S. Batten, *Journal of International Money and Finance*, December 1984, Vol. 3, No. 3, pp. 279-92.

"Bank Money, Net Wealth and the Real-Balance Effect," *Journal of Macroeconomics*, Winter 1983, Vol. 5, No. 1, pp. 105-17.

"The Long-Run and Short-Run Demand for Money: Additional Evidence," *Journal of Macroeconomics*, Summer 1982, Vol. 4, No. 3, pp. 325-38.

"Maximum Likelihood Estimates of a Partial Adjustment-Adaptive Expectations Model of the Demand for Money," *Review of Economics and Statistics*, May 1982, Vol. 64, No. 2, pp. 325-29.

"Bank Money as Net Wealth: A Comment," *Atlantic Economic Journal*, December 1981, Vol. 9, No. 4, pp. 43-45.

"The Empirical Significance of the Real Balance Effect," with Paul E. Smith, *Journal of Macroeconomics*, Summer 1980, Vol. 2, No. 3, pp. 213-32.

"In-Service Education and Its Effects on Secondary Students: A New Approach," with George M. Vredevelde, *Journal of Economic Education*, Spring 1977, Vol. 8, No. 2, pp. 93-99.

Working Papers

"An Evaluation of Event-Study Evidence on the Effectiveness of the FOMC's LSAP Program: The Reasonable Person Standard," Federal Reserve Bank of St. Louis Working Paper 2013-033B, March 2014.

"How Effective Is Central Bank Forward Guidance?" with Clemens J.M. Kool, Federal Reserve Bank of St. Louis Working Paper 2012-063A, December 2012.

"Evidence on The Portfolio Balance Channel of Quantitative Easing," Federal Reserve Bank of St. Louis Working Paper 2012-015A, October 2012.

"The Federal Reserve's response to the financial crisis: what it did and what it should have done," Federal Reserve Bank of St. Louis Working Paper 2012-050A, October 2012.

"Greenspan's Conundrum and the Fed's Ability to Affect Long-Term Yields," Federal Reserve Bank of St. Louis Working Paper 2012-036A, September 2012.

"Predictions of Short-Term Rates and the Expectations Hypothesis," with Massimo Guidolin, Federal Reserve Bank of St. Louis Working Paper 2010-013B, January 2011.

"The Unusual Behavior of the Federal Funds Rate and Treasury Yields: A Conundrum or an Instance of Goodhart's Law?" Federal Reserve Bank of St. Louis Working Paper 2007-039C, August 2009.

"Revisiting the Predictability of Bond Risk Premia," with Giorgio Valente, Federal Reserve Bank of St. Louis Working Paper 2009-009A, March 2009.

"Resolving the Unbiasedness Puzzle in the Foreign Exchange Market," Federal Reserve Bank of St. Louis Working Paper 2009-002A, January 2009.

"Monetary Policy: Why Money Matters and Interest Rates Don't," Federal Reserve Bank of St. Louis Working Paper 2008-011A, April 2008.

"Resolving the Unbiasedness and Forward Premium Puzzles," Federal Reserve Bank of St. Louis Working Paper 2007-014A, February 2007.

"The Daily and Policy-Relevant Liquidity Effect," Federal Reserve Bank of St. Louis Working Paper 2007-001B, December 2006.

"The Daily Liquidity Effect," Federal Reserve Bank of St. Louis Working Paper 2006-020A, April 2006.

"A New Federal Funds Rate Target Series: September 27, 1982 — December 31, 1993," Federal Reserve Bank of St. Louis Working Paper 2005-032A, May 2005.

"A Dynamic Factor Analysis of the Response of U. S. Interest Rates to News," with Marco Lippi, Federal Reserve Bank of St. Louis Working Paper 2004-013A, July 2004.

"Predictions of Short-Term Rates and the Expectations Hypothesis of the Term Structure of Interest Rates," Federal Reserve Bank of St. Louis Working Paper 2004-010A, June 2004.

"Do Bank Loan Rates Exhibit a Countercyclical Mark-up?" with Michael J. Dueker, Federal Reserve Bank of St. Louis Working Paper 1997-004A, February 1997.

"Discount Rate Policies of Five Federal Reserve Chairmen," Federal Reserve Bank of St. Louis Working Paper 1996-001A, February 1996.

"Asymmetry in the Prime Rate and Firms' Preference for Internal Finance," with Michael J. Dueker, Federal Reserve Bank of St. Louis Working Paper 1994-017A, January 1994.

"Should Consumer Expenditures be the Scale Variable in Empirical Money Demand Equations?" Federal Reserve Bank of St. Louis Working Paper 1988-003A, January 1988.

"Weighted Monetary Aggregates As Intermediate Targets," with Dallas S. Batten, Federal Reserve Bank of St. Louis Working Paper 1985-010A, November 1984.

"A Note on the Relative Efficiency of the Cochrane-Orcutt and OLS Estimators when the Autocorrelation Process has a Finite Past," Federal Reserve Bank of St. Louis Working Paper 1984-002A, January 1984.

"Tests of Price Sluggishness in the U.K.," with K. Alec Chrystal, Federal Reserve Bank of St. Louis Working Paper 1984-019A, January 1984.

"The Real-Balance Effect with Resource-Using Money: A Capital-Theoretic Interpretation," Federal Reserve Bank of St. Louis Working Paper 1983-010A, January 1983.

"Endpoint Constraints and the St. Louis Equation: A Clarification," with Dallas S. Batten, Federal Reserve Bank of St. Louis Working Paper 1983-001A, January 1983.

"Complete Results for Lag Length Selection," with Dallas S. Batten, Federal Reserve Bank of St. Louis Working Paper 1983-009A, January 1983.

"The Appropriate Autocorrelation Transformation when the Autocorrelation Process has a Finite Past," Federal Reserve Bank of St. Louis Working Paper 1982-002B, February 1982.

Articles in Federal Reserve Bank of St. Louis Publications

"How Effective Is Central Bank Forward Guidance?" Federal Reserve Bank of St. Louis *Review*, Fourth Quarter 2015, Vol. 97, No. 4, pp. 303-22.

"Making Sense of Dissents: A History of FOMC Dissents," Federal Reserve Bank of St. Louis *Review*, Third Quarter 2014, Vol. 96, No. 3, pp. 213-227.

"QE: Is There a Portfolio Balance Effect?" Federal Reserve Bank of St. Louis *Review*, First Quarter 2014, Vol. 96, No. 1, pp. 55-72.

"The U.S. Deficit/Debt Problem: A Longer-Run Perspective," Federal Reserve Bank of St. Louis *Review*, November/December 2012, Vol. 94, No. 6, pp. 441-456.

"The Dual Mandate: Has the Fed Changed Its Objective?" Federal Reserve Bank of St. Louis *Review*, March/April 2012, Vol. 94, No. 2, pp. 117-134.

"How Did We Get to Inflation Targeting and Where Do We Need to Go to Now? A Perspective from the U.S. Experience," Federal Reserve Bank of St. Louis *Review*, January/February 2012, Vol. 94, No. 1, pp. 65-81.

"How Good Are the Government's Deficit and Debt Projections and Should We Care?" Federal Reserve Bank of St. Louis *Review*, January/February 2012, Vol. 94, No. 1, pp. 21-39.

"The Effectiveness of Unconventional Monetary Policy: The Term Auction Facility," Federal Reserve Bank of St. Louis *Review*, November/December 2011, Vol. 93, No. 6, pp. 439-454.

"The Relationship Between the Daily and Policy-Relevant Liquidity Effects," Federal Reserve Bank of St. Louis *Review*, January/February 2010, Vol. 92, No. 1, pp. 73-88.

"The Fed, Liquidity, and Credit Allocation," Federal Reserve Bank of St. Louis *Review*, January/February 2009, Vol. 91, No. 1, pp. 13-22.

"A Primer on the Mortgage Market and Mortgage Finance," Federal Reserve Bank of St. Louis *Review*, January/February 2008, Vol. 90, No. 1, pp. 31-46.

"Open Market Operations and the Federal Funds Rate," Federal Reserve Bank of St. Louis *Review*, November/December 2007, Vol. 89, No. 6, pp. 549-570.

"The Lower and Upper Bounds of the Federal Open Market Committee's Long-Run Inflation Objective," Federal Reserve Bank of St. Louis *Review*, May/June 2007, Vol. 89, No. 3, pp. 183-194.

"Editors' Introduction," Federal Reserve Bank of St. Louis *Review*, March/April 2005, Part 2, Vol. 87, No. 2, pp. 139-144.

"Testing the Expectations Hypothesis: Some New Evidence for Japan," Federal Reserve Bank of St. Louis *Review*, September/October 2004, Vol. 86, No. 5, pp. 21-40.

"Editors' Introduction," Federal Reserve Bank of St. Louis *Review*, July/August 2004, Vol. 86, No. 4, pp. 3-14.

"The Efficient Market Hypothesis and Identification in Structural VARs," Federal Reserve Bank of St. Louis *Review*, January/February 2004, Vol. 86, No. 1, pp. 49-60.

"The FOMC's Balance-of-Risks Statement and Market Expectations of Policy Actions," Federal Reserve Bank of St. Louis *Review*, September/October 2002, Vol. 84, No. 5, pp. 37-50.

"Editor's Introduction," Federal Reserve Bank of St. Louis *Review*, July/August 2002, Vol. 84, No. 4, pp. 7-14.

"Market Anticipations of Monetary Policy Actions," Federal Reserve Bank of St. Louis *Review*, July/August 2002, Vol. 84, No. 4, pp. 65-94.

"Identifying the Liquidity Effect at the Daily Frequency," Federal Reserve Bank of St. Louis *Review*, July/August 2001, Vol. 83, No. 4, pp. 59-78.

"Editor's Introduction," Federal Reserve Bank of St. Louis *Review*, July/August 2001, Vol. 83, No. 4, pp. 7-16.

"The Expected Federal Budget Surplus: How Much Confidence Should the Public and Policymakers Place in the Projections," Federal Reserve Bank of St. Louis *Review*, March/April 2001, Vol. 83, No. 2, pp. 11-24.

"A History of the Asymmetric Policy Directive," Federal Reserve Bank of St. Louis *Review*, September/October 2000, Vol. 82, No. 5, pp. 1-16.

"Money in a Theory of Exchange," Federal Reserve Bank of St. Louis *Review*, January/February 2000, Vol. 82, No. 1, pp. 35-62.

"Tests of the Market's Reaction to Federal Funds Rate Target Changes," Federal Reserve Bank of St. Louis *Review*, November/December 1998, Vol. 80, No. 6, pp. 25-36.

"Using Federal Funds Futures Rates to Predict Federal Reserve Actions," Federal Reserve Bank of St. Louis *Review*, November/December 1997, Vol. 79, No. 6, pp. 45-53.

"Does the Fed's New Policy of Immediate Disclosure Affect the Market?" Federal Reserve Bank of St. Louis *Review*, November/December 1996, Vol. 78, No. 6, pp. 77-88.

"The Costs and Benefits of Price Stability: An Assessment of Howitt's Rule," Federal Reserve Bank of St. Louis *Review*, March/April 1996, Vol. 78, No. 2, pp. 23-38.

"Is There a Case for 'Moderate' Inflation?" Federal Reserve Bank of St. Louis *Review*, July/August 1995, Vol. 77, No. 4, pp. 27-38.

"Editor's Introduction: Channels of Policy Proceedings of the Nineteenth Annual Economic Policy Conference," Federal Reserve Bank of St. Louis *Review*, May/June 1995, Vol. 77, No. 3, pp. vii-xii.

"Financial Innovation Deregulation and the 'Credit View' of Monetary Policy," Federal Reserve Bank of St. Louis *Review*, January/February 1994, Vol. 76, No. 1, pp. 31-49.

"An Extended Series of Divisia Monetary Aggregates," Federal Reserve Bank of St. Louis *Review*, November/December 1992, Vol. 74, No. 6, pp. 35-52.

"Targeting M2: The Issue of Monetary Control," *Federal Reserve Bank of St. Louis Review*, July/August 1992, Vol. 74, No. 4, pp. 23-35.

"Alternative Measures of the Monetary Base: What Are the Differences and Are They Important?" *Federal Reserve Bank of St. Louis Review*, November/December 1991, Vol. 73, No. 6, pp. 19-35.

"The Multiplier Approach to the Money Supply Process: A Precautionary Note," *Federal Reserve Bank of St. Louis Review*, July/August 1991, Vol. 73, No. 4, pp. 47-64.

"A Primer on Cointegration with an Application to Money and Income," *Federal Reserve Bank of St. Louis Review*, March/April 1991, Vol. 73, No. 2, pp. 58-78.

"Do Government Deficits Matter?" *Federal Reserve Bank of St. Louis Review*, September/October 1990, Vol. 72, No. 5, pp. 25-39.

"The Link Between M1 and the Monetary Base in the 1980's," *Federal Reserve Bank of St. Louis Review*, September/October 1989, Vol. 71, No. 5, pp. 35-52.

"Tests of Covered Interest Rate Parity," *Federal Reserve Bank of St. Louis Review*, July/August 1989, Vol. 71, No. 4, pp. 55-66.

"The Macroeconomic Effects of Deficit Spending: A Review," *Federal Reserve Bank of St. Louis Review*, November/December 1988, Vol. 70, No. 6, pp. 48-60.

"The Effect of Monetary Policy on Short-Term Interest Rates," *Federal Reserve Bank of St. Louis Review*, May/June 1988, Vol. 70, No. 3, pp. 53-72.

"The Borrowed-Reserves Operating Procedures: Theory and Evidence," *Federal Reserve Bank of St. Louis Review*, January/February 1988, Vol. 70, No. 1, pp. 30-54.

"Solving the 1980s' Velocity Puzzle: A Progress Report," *Federal Reserve Bank of St. Louis Review*, August/September 1987, Vol. 69, No. 7, pp. 5-23.

"The Monetary-Fiscal Policy Debate and the Andersen-Jordan Equation," *Federal Reserve Bank of St. Louis Review*, October 1986, Vol. 68, No. 8, pp. 9-17.

"The Discount Rate and Market Interest Rates: Theory and Evidence," *Federal Reserve Bank of St. Louis Review*, August/September 1986, Vol. 68, No. 7, pp. 5-21.

"The Cost of Checkable Deposits in the United States," *Federal Reserve Bank of St. Louis Review*, April 1986, Vol. 68, No. 4, pp. 19-27.

"Are Weighted Monetary Aggregates Better Than Simple-Sum M1?" Federal Reserve Bank of St. Louis *Review*, June/July 1985, Vol. 67, No. 6, pp. 29-40.

"Money Demand Dynamics: Some New Evidence," Federal Reserve Bank of St. Louis *Review*, March 1985, Vol. 67, No. 3, pp. 14-23.

"The Discount Rate, Interest Rates and Foreign Exchange Rates: An Analysis with Daily Data," Federal Reserve Bank of St. Louis *Review*, February 1985, Vol. 67, No. 2, pp. 22-30.

"Monetizing the Debt," Federal Reserve Bank of St. Louis *Review*, December 1984, pp. 30-43.

"An Early Look at the Volatility of Money and Interest Rates under CRR," Federal Reserve Bank of St. Louis *Review*, October 1984, Vol. 66, No. 8, pp. 26-32.

"How Robust Are the Policy Conclusions of the St. Louis Equation?: Some Further Evidence," Federal Reserve Bank of St. Louis *Review*, June/July 1984, Vol. 66, No. 6, pp. 26-32.

"Why Does Velocity Matter?" Federal Reserve Bank of St. Louis *Review*, December 1983, pp. 5-13.

"Lagged and Contemporaneous Reserve Accounting: An Alternative View," Federal Reserve Bank of St. Louis *Review*, November 1983, Vol. 65, No. 9, pp. 26-33.

"The FOMC in 1982: De-emphasizing M1," Federal Reserve Bank of St. Louis *Review*, June/July 1983, Vol. 65, No. 6, pp. 26-35.

"M1 or M2: Which Is the Better Monetary Target?" Federal Reserve Bank of St. Louis *Review*, June/July 1983, Vol. 65, No. 6, pp. 36-42.

"Polynomial Distributed Lags and the Estimation of the St. Louis Equation," Federal Reserve Bank of St. Louis *Review*, April 1983, Vol. 65, No. 4, pp. 13-25.

"Simple Analytics of the Money Supply Process and Monetary Control," Federal Reserve Bank of St. Louis *Review*, October 1982, pp. 22-39.

"The Discount Rate and Market Interest Rates: What's the Connection?" Federal Reserve Bank of St. Louis *Review*, June/July 1982, pp. 3-14.

"The FOMC in 1981: Monetary Control in a Changing Financial Environment," Federal Reserve Bank of St. Louis *Review*, April 1982, pp. 3-22.