

Curriculum Vitae

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Date of Birth

July 19, 1943

Education

University of California at Berkeley, B.A., June, 1964
Harvard University, Ph.D., March 1968.

Work Experience

January 1967 – January 1968,	Research Associate, Carnegie Institute of Technology
February 1968 – December 1969	First Lieutenant and Captain, U.S. Army. Served as Staff Member and Acting Director, Economics Division, Office of the Assistant Secretary of Defense (Systems Analysis)
January 1970 – June 1971	Associate Professor of Economics, University of Pennsylvania
September 1971 – June 1987	Associate Professor of Economics, University of Minnesota; Professor from July 1975
January 1970 – June 1973; 1979 – present	Research Associate, National Bureau of Economic Research
January 1973 – December 1973	Member, Brookings Panel on Economic Activity
September 1976 – June 1977	Ford Foundation Visiting Research Professor of Economics, University of Chicago
June, 1971 – June 1987	Advisor, Federal Reserve Bank of Minneapolis
September 1981 – June 1982	Visiting Professor of Economics, Harvard University and Research Associate, National Bureau of Economic Research
August 1985 – March 1987	Visiting Scholar, Hoover Institution, Stanford University, Stanford, California
March 1987 – present	Senior Fellow, Hoover Institution, Stanford University, Stanford, California
July 1991 – July 1998	David Rockefeller Professor of Economics, University of Chicago
July 1998 – September 2002	Donald Lucas Professor of Economics, Stanford University
September 2002 – present	Berkley Professor of Economics and Business, New York University

Professional Activities

- Associate Editor, *Journal of Monetary Economics*, July 1974 – July 1979.
- Associate Editor, *Journal of Money, Credit and Banking*, January 1973 – July 1974.
- Associate Editor, *Journal of Finance*, January 1974 – December 1974.
- Associate Editor, *Journal of Econometrics*, September 1976 – September 1978.
- Associate Editor, *Review of Economics and Statistics*, June 1977 – June 1981.
- Co-Editor, *Review of Economic Dynamics*, November 1996 – December 1998.
- Associate Editor, *Journal of Economic Theory*, September 2002 – present.

Honors and Awards

Phi Beta Kappa, May 1963.

University Medalist as Most Distinguished Scholar in Class of 1964, University of California – Berkeley.

National Science Foundation, Woodrow Wilson, Harvard Graduate Prize Fellowships.

Fellow of Econometric Society, 1976.

Mary Elizabeth Morgan Prize for Excellence in Economics, awarded by University of Chicago, 1979.

Fellow of National Academy of Sciences, April 1983.

Fellow of American Academy of Arts and Sciences, May 1983.

Recipient of 1996–97 Erwin Plein Nemmers Prize in Economics from Northwestern University.

Marshall Lecturer, Cambridge, England. October 1996.

Moore Distinguished Scholar, California Institute of Technology, 2000-2001.

Honorary doctorate, Stockholm School of Economics, 2003.

Organizational Service

American Economic Association: Executive Committee, 1986–88. Vice President, 2000-2001. President elect, 2006. President, 2007.

Econometric Society Council, 1987–1992; 1995–1999. Second Vice President, 2003. First Vice President, 2004. President, 2005.

President, Society for Economic Dynamics and Control, 1989–1992.

Books

Robustness, with Lars Peter Hansen, Princeton University Press, 2007.

Recursive Macroeconomic Theory, Second Edition, with Lars Ljungqvist, MIT Press, 2004.

The Big Problem of Small Change, with François Velde, Princeton University Press, 2002.

The Conquest of American Inflation, Princeton University Press, Princeton, N.J., 1999.

Bounded Rationality in Macroeconomics, Oxford University Press, Oxford, 1993.

Rational Expectations and Inflation (reprinted articles), New York: Harper and Row, second edition, 1992. (Referred to below as *REI*).

Rational Expectations Econometrics (with Lars Hansen), Westview Press, Boulder, 1991.

Exercises in Dynamic Macroeconomic Theory (with Rodolfo Manuelli), Cambridge, MA: Harvard University Press, 1987.

Dynamic Macroeconomic Theory, Cambridge, MA: Harvard University Press, 1987.

Energy, Foresight and Strategy, editor. Washington: Resources for the Future, 1985.

Rational Expectations and Econometric Practice, a book of readings, edited with Robert E. Lucas, Jr. Minneapolis: University of Minnesota Press, 1981. (Referred to below as *REEP*).

Macroeconomic Theory, New York: Academic Press, 1979. Second edition, 1987.

Book Reviews

- “Game Theory and Economic Modelling,” by David Kreps. *Journal of Political Economy*, April 1992, pp. 665-672.
- “Central Banking in Theory and Practice: Lionel Robbins Lectures.” by Alan S. Blinder Review, *Journal of Political Economy*, April 1999, pp. 419-425.

Interview

- “An Interview with Thomas J. Sargent,” *Macroeconomic Dynamics*, Vol. 9, 2005, pp. 561-583.

Articles

- “Evolution and Intelligent Design,” *American Economic Review*, March 2008.
- “Two Questions About European Unemployment,” (with Lars Ljungqvist), *Econometrica*, Vol. 76, No. 1 (January, 2008), pp. 129.
- “The Market Price of Risk and the Equity Premium: A Legacy of the Great Depression,” (with Timothy Cogley), *Journal of Monetary Economics*, 2008, forthcoming.
- “Robustness and U.S. Monetary Policy Experimentation,” (with Timothy Cogley, Riccardo Colacito, and Lars Peter Hansen), *Journal of Money, Credit and Banking*, 2008, forthcoming.
- “Rational Expectations,” in *The New Palgrave Dictionary of Economics*, edited by Steven Durlauf and Larry Blume, 2008.
- “Self-confirming equilibrium,” (with In-Koo Cho) in *The New Palgrave Dictionary of Economics*, edited by Steven Durlauf and Larry Blume, 2008.
- “Understanding European Unemployment with Matching and Search-Island Models,” (with Lars Ljungqvist), *Journal of Monetary Economics*, vol. 54, No. 8, (November, 2007), pp. 2139–2179.
- “Understanding European Unemployment with a Representative Family Model,” (with Lars Ljungqvist), *Journal of Monetary Economics*, vol. 54, No. 8, (November, 2007), pp. 2180-2204.
- “Recursive Robust Estimation and Control Without Commitment,” (with Lars Peter Hansen), *Journal of Economic Theory*, vol. 136, 2007, pp. 1-27.
- “Comment on Bansal’s ‘Long run risk’ ”, *Federal Reserve Bank of St. Louis Review*, July-August 2007 Vol. 89, No. 4, pp. 301-304.
- “Politics and Efficiency of Separating Capital and Ordinary Government Budgets,” (with Marco Bassetto), *Quarterly Journal of Economics*, November 2006, pp. 1167-1210.
- “Benefits from U.S. Monetary Policy Experimentation in the Days of Samuelson and Solow and Lucas,” (with Timothy Cogley and Ricardo Colacito), *Journal of Money, Credit, and Banking*, Vol. 39, No. 1, February, 2007, pp. 67-99.
- Robust Control and Model Misspecification (with Lars Peter Hansen, Gauhar Turmuhambetova, and Noah Williams), *Journal of Economic Theory*, 2006, Volume 128, 2006, pp. 45–90.
- “Do Taxes Explain European Employment? Indivisible Labor, Human Capital, Lotteries, and Savings.” (with Lars Ljungqvist). In: Acemoglu, D., Rogoff, K., Woodford, M. (Eds.), *NBER Macroeconomics Annual, 2006* MIT Press, Cambridge, MA, pp. 181-224.
- “Shocks and Government Beliefs: The Rise and Fall of American Inflation,” (with Noah Williams and Tao Zha), *American Economic Review*, 2006, Vol. 96, No. 4, pp. 1193-1224.
- “Robust Estimation and Control under Commitment,” (with Lars Peter Hansen), *Journal of Economic Theory*, Vol. 124, No. 2, 2005, pp. 248–301.
- “ ‘Certainty Equivalence’ and ‘Model Uncertainty’ ” (with Lars Peter Hansen) in *Models and Monetary Policy: Research in the Tradition of Dale Henderson, Richard Porter, and Peter Tinsley*, edited by Jon Faust, Athanasios Orphanides, and David Reifschneider, Board of Governors, Federal Reserve System, 2005.

- “The Conquest of American Inflation: Learning and Robustness to Model Uncertainty,” *Review of Economic Dynamics*, Vol. 8, 2005, pp. 528–563 .
- “Impacts of Priors on Convergence and Escapes from Nash Inflation” (with Noah Williams), *Review of Economic Dynamics*, Vol. 8, 2005, pp. 360-391.
- “Knowing the Forecasts of Others,” (with Joseph Pearlman), *Review of Economic Dynamics*, Vol. 8, 2005, pp. 480–497.
- “Drifts and Volatilities: Monetary Policies and Outcomes in the Post WWII U.S. (with Timothy Cogley), *Review of Economic Dynamics*, Vol. 8, 2005, pp. 262-302.
- “Bayesian Fan Charts for U.K. Inflation: Forecasting and Sources of Uncertainty in an Evolving Monetary System,” (with Timothy Cogley and Sergei Morozov), *Journal of Economic Dynamics and Control*, 2005, Vol. 29, pp. 1893–1925.
- “Lotteries for consumers versus lotteries for firms,” (2004) (with Lars Ljungqvist), *Frontiers in Applied General Equilibrium Modeling*, edited by Timothy J. Kehoe, T. N. Srinivasan and John Whalley. Cambridge University Press.
- “European Unemployment and Turbulence Revisited in a Matching Model,” (2004), (with Lars Ljungqvist), *Journal of the European Economic Association*, April-May, 2(2-3), pp. 456-468.
- “A Quartet of Semigroups for Model Specification, Robustness, Prices of Risk, and Model Detection, ” (with Evan Anderson and Lars Peter Hansen), *Journal of the European Economic Association*. March 2003; 1(1): 68-123.
- “Laboratory Experiments with an Expectational Phillips Curve,” (with Jasmina Arifovic), in *Procedures and Evolution in Central Banking*, edited by David Altig and Bruce Smith, 2003, Cambridge University Press.
- “Comment on ‘Adaptive Learning and Monetary Policy Design’ by George Evans and Seppo Honkapohja”, , *Journal of Money, Credit, and Banking*. 2003, Part 2 Dec. 35(6): 1081-84.
- “Comment on ‘Policy Evaluation in Uncertain Economic Environments,’ by William Brock, Steven Durlauf, and Kenneth West” (2003), *Brookings Papers on Economic Activity*. (1): 308-13.
- “European Unemployment: From a Worker’s Perspective,” (with Lars Ljungqvist), in *Knowledge, Information, and Expectations, in Modern Macroeconomics in Honor of Edmund S. Phelps*, edited by Philippe Aghion, Roman Frydman, Joseph Stiglitz, and Michael Woodford, Princeton University Press, 2003.
- “Robust Control of Forward Looking Models,” (2003), (with Lars Peter Hansen), *Journal of Monetary Economics*, April, 50(3): 581-604.
- “Optimal Taxation without State Contingent Debt,” (with Rao Aiyagari, Albert Marcet and Juha Seppala), *Journal of Political Economy*, December 2002.
- “Robust and Pricing with Uncertain Growth,” (with Marco Cagetti, Lars Peter Hansen, and Noah Williams), *Review of Financial Studies*, 15(2): pp. 363-404, March 2002.
- “Reactions to the Berkeley Story: A comment on ‘The evolution of economic understanding and postwar stabilization policy’ by Christina D. Romer and David Romer,” (2002) in *Rethinking Stabilization Policy*, Symposium Sponsored by the Federal Reserve Bank of Kansas City.
- “Comment on Christopher Sims’s ‘Fiscal Consequences for Mexico of Adopting the Dollar’ ”, (2001), *Journal of Money, Credit, and Banking*. Part 2 May; 33(2): pp. 617-25.
- “Robust Permanent Income and Pricing with Filtering,” (with Lars Peter Hansen and Neng Wang), *Macroeconomic Dynamics*, 6, pp. 40–84, February 2002.
- “Escaping Nash Inflation,” (with In-Koo Cho and Noah Williams), *Review of Economic Studies*, 69: 1-40, January 2002.
- “Evolving Post-World War II U.S. Inflation Dynamics,” (with Timothy Cogley), in *Macroeconomic Annual*, 2001, ed. Ben Bernanke and Kenneth Rogoff.
- “Acknowledging Misspecification in Macroeconomic Theory,” (with Lars Hansen), *Review of Economic Dynamics*, Vol. 4, No. 3, July 2001, pp. 519–535.

- “Discussion of ‘Can Market and Voting Institutions Generate Optimal Intergenerational Risk Sharing?’, by Antonio Rangel and Richard Zeckhauser”, (2001), in *Risk Aspects of Investment-Based Social Security Reform*, edited by John Campbell and Martin Feldstein for the NBER, University of Chicago Press.
- “Saving and Pension Reform in General Equilibrium Models,” (2001), (with Mariacristina De Nardi and Selahattin Imrohorglu), *Oxford-Review-of-Economic-Policy*. Spring; 17(1): 20-39.
- “Robust Control and Model Uncertainty,” (with Lars Hansen), *American Economic Review*, Vol. 91, No. 2 (May 2001), pp. 60-66.
- “An Appreciation of A. W. Phillips,” (with Lars Hansen), in A. W. Phillips, *Collected Works in Contemporary Perspective*, edited by R. Leeson, Cambridge University Press, 2000.
- “Robust Permanent Income and Pricing” (with Lars Hansen and Thomas Tallarini, Jr.), *Review of Economic Studies*, Vol 66, 1999, pp. 873-907.
- “Optimal fiscal policy in a linear stochastic economy,” (with François Velde), in Ramon Marimon and Andrew Scott, eds., *Computational Methods for the Study of Dynamic Economies*, 1999, Oxford University Press, Oxford.
- “Policy Rules for Open Economies,” (Discussion of Laurence Ball), in John Taylor, editor, *Monetary Policy Rules*, University of Chicago Press, 1999.
- “Projected U. S. Demographics and Social Security,” (with Mariacristina De Nardi and Selahattin Imrohorglu), *Review of Economic Dynamics*, Volume 2, 1999, pp. 575–616.
- “A Primer on Monetary and Fiscal Policy,” *Journal of Banking and Finance*, 1999, volume 23, pp. 1463-1482.
- “The Big Problem of Small Change,” (with François Velde), *Journal of Money, Credit, and Banking*, May 1999, pp. 138–161.
- “The European Unemployment Dilemma,” (with Lars Ljungqvist), *Journal of Political Economy*, June, 1998, vol 106, n3, 514-50.
- “Comment on ‘Stimulating the Privatization of Social Security in General Equilibrium,’ by Laurence Kotlikoff,” (1998) in *Privatizing Social Security*, edited by Martin Feldstein for the NBER, University of Chicago Press.
- “Taxes and Subsidies in Swedish Unemployment,” (with Lars Ljungqvist), in *The welfare state in transition: Reforming the Swedish model*, : NBER Conference Report series. Chicago and London: University of Chicago Press, 1997, pp. 299-314.
- “Accounting Properly for the Government’s Interest Costs,” (with George Hall), *Federal Reserve Bank of Chicago Economic Perspectives*. 1997, vol. 21, no. 4, 18-28.
- “Two Computations to Fund Social Security,” (with He Huang and Selahattin Imrohorglu), *Macroeconomic Dynamics*, 1997, vol. 1, no. 1, 7-44.
- Comment on “Stopping Inflation, Big and Small,” *Journal of Money, Credit, and Banking*, Part 2 November 1997, vol. 29, no. 4, 776-77.
- “Coinage, Debasements, and Gresham’s Laws,” (with Bruce Smith), in *Economic Theory*, August 1997, vol. 10, no. 2, 197-226.
- “A Supply-Side Explanation of European Unemployment,” (with Lars Ljungqvist), *Federal Reserve Bank of Chicago Economic Perspectives*. Vol. 20, Sept.-Oct., 1996, pp. 2–15.
- “Expectations and the Nonneutrality of Lucas,” *Journal of Monetary Economics*, vol. 37, June 1996, pp. 535–548.
- “Mechanics of Forming and Estimating Dynamic Linear Economies,” (with Evan Anderson, Lars P. Hansen, and Ellen McGrattan), in *Handbook of Computational Economics*, edited by John Rust, December 1995. North Holland.
- “Neural Networks for Encoding and Adapting in Dynamic Economies,” (with In-Koo Cho), in *Handbook of Computational Economics*, edited by John Rust, December 1995. North Holland.
- “Macroeconomic Features of the French Revolution,” (with François Velde), in *Journal of Political Economy*, vol. 103, June 1995, pp. 474–518.

- “Discounted Linear Exponential Quadratic Gaussian Control,” (with Lars P. Hansen), in *IEEE Transactions on Automatic Control*, vol.40, May 1995, pp. 968–971.
- “The Swedish Unemployment Experience,” (with Lars Ljungqvist), in *European Economic Review*, 39, 1995, pp. 1043–1070.
- “Welfare States and Unemployment,” (with Lars Ljungqvist), in *Economic Theory*, 6, 1995, pp. 143–160.
- “Speed of Convergence of Recursive Least Squares Learning with ARMA Perceptions,” in *Learning and Rationality in Economics*, eds. (with Albert Marcet) in *Learning and Rationality in Economics*, Alan Kirman and Mark Salmon. Basil Blackwell, Oxford, 1995.
- “A Dynamic Index Model for Large Cross Sections,” (with Danny Quah), in *Business Cycles, Indicators, and Forecasting*, edited by James Stock and Mark Watson for the NBER, University of Chicago Press, p. 285–309, 1993.
- “Seasonality and Approximation Errors in Rational Expectations Models,” (with Lars Hansen) *Journal of Econometrics*, vol. 55, 1993, pp. 21–55.
- “On the Preservation of Deterministic Cycles when Some Agents Perceive them to be Random Fluctuations,” (with George Evans and Seppo Honkapohja), in *Journal of Economic Dynamics and Control*, vol. 17, 1993, p. 705–721.
- “The Convergence of Vector Autoregressions to Rational Expectations Equilibria,” (with Albert Marcet), in *Macroeconomics: A Survey of Research Strategies*, eds. Alessandro Vercelli and Nicola Dimitri. Oxford University Press, p. 139–164, 1992.
- “Observable Implications of Present Value Budget Balance,” (with Lars Hansen and Will Roberts), in *Rational Expectations Econometrics*, ed. by Lars Peter Hansen and Thomas J. Sargent, Westview Press, 1991.
- “Equilibrium with Signal Extraction from Endogenous Variables,” *Journal of Economic Dynamics and Control*, 1991.
- “Continuous Time Linear Models of Dynamic Economies,” (with Lars Hansen and John Heaton), in *Rational Expectations Econometrics*, ed. by Lars Peter Hansen and Thomas J. Sargent, Westview Press, 1991.
- “Two Difficulties in Interpreting Vector Autoregressions,” (with L.P. Hansen), in *Rational Expectations Econometrics*, ed. by Lars Peter Hansen and Thomas J. Sargent, Westview Press, 1991.
- “Identification of Continuous Time Rational Expectations Models From Discrete Time Data,” (with L. P. Hansen), in *Rational Expectations Econometrics*, ed. by Lars Peter Hansen and Thomas J. Sargent, Westview Press, 1991.
- “Exact Linear Rational Expectations Models: Specification and Estimation,” (with L.P. Hansen), in *Rational Expectations Econometrics*, ed. by Lars Peter Hansen and Thomas J. Sargent, Westview Press, 1991.
- “Money as a Medium of Exchange in an Economy With Artificially Intelligent Agents,” (with Ramon Marimon, and Ellen McGrattan), in *Journal of Economic Dynamics and Control*, no. 14, 1990.
- “The Analytics of German Monetary Reform”, with François Velde, *Federal Reserve Bank of San Francisco Quarterly Review*, fall 1990.
- “Elements of Monetary Reform,” in *Monetary Policy for a Changing Financial Environment*, edited by William S. Haraf and Phillip Cagan, The AEI Press, Washington, D.C., 1990.
- “Two Models of Measurements and the Investment Accelerator,” *Journal of Political Economy*, 1989, vol. 97, no. 2.
- “Least Squares Learning and the Dynamics of Hyperinflation,” (with Albert Marcet) in *Sunspots, Complexity, and Chaos*, ed. by W. Barnett, J. Geweke and K. Shell, Cambridge University Press, 1989.
- “Convergence of Least Squares Learning in Environments with Hidden State Variables and Private Information,” (with Albert Marcet), *Journal of Political Economy*, vol. 97, no. 6, 1989.
- “Convergence of Least Squares Learning Mechanisms in Self-Referential Linear Stochastic Models,” (with Albert Marcet), *Journal of Economic Theory*, vol. 48, no. 2, August 1989.
- “Models of Business Cycles: A Review Essay,” (with Rodolfo Manuelli), *Journal of Monetary Economics*, vol. 22, no. 3, November 1988.

- “Interpreting New Evidence About China and U.S. Silver Purchases,” (with Loren Brandt), *Journal of Monetary Economics*, Jan. 1989.
- “The Role of Monetary Policy Under U.S. Institutions,” in *Thinking About America*, ed. by A. Anderson and D. Bark, Hoover Institution, 1988.
- “Straight Time and Overtime in General Equilibrium,” (with Gary D. Hansen), *Journal of Monetary Economics*, vol. 21, no. 213, March-May 1988.
- “Some of Milton Friedman’s Scientific Contributions to Macroeconomics,” Hoover Institution Monograph, 1987.
- “The Irrelevance of Government Foreign Exchange Operations,” (with Bruce Smith), in *Economic Effects of the Government Budget*, ed. by E. Helpman, A. Razin and E. Zadka, M.I.T. Press, 1988.
- “The Fate of Systems With Adaptive Expectations,” (with Albert Marcet), *American Economic Association Papers and Proceedings*, May 1988.
- “Inflation and the Government Budget Constraint,” (with Neil Wallace), in *Economic Policy in Theory and Practice*, ed. by Assaf Razin and Efraim Sadka, MacMillan Press, London, 1987.
- “Irrelevance of Open-Market Operations in Some Economies With Government Currency Being Dominated in Rate of Return,” (with Bruce D. Smith), *American Economic Review*, March 1987.
- “Interest on Reserves,” (with N. Wallace), *Journal of Monetary Economics*, 15:3, May, 1985, p. 279–90. (FRB Working Paper No. 211, October, 1984).
- “Reaganomics and Credibility” in: *Monetary Policy in Our Times*, ed. by A. Ando, et al., MIT Press, 1985, p. 235–52. (Reprinted in *REI*, p. 19–39).
- “Energy, Foresight and Strategy,” Introductory Essay in: *Energy, Foresight, and Strategy*, ed. by Thomas J. Sargent, Resources for the Future, 1985, p. 1–13.
- “A Reply to Darby’s ‘Some Pleasant Monetarist Arithmetic,’ ” (with P.J. Miller), Federal Reserve Bank of Minneapolis *Quarterly Review*, 8:2, Spring, 1984, p. 21–26. (Reprinted in *FRB Quarterly Review*, 9:1, Wtr., 1985, p. 38–43).
- “Autoregressions, Expectations, and Advice,” *American Economic Review*, 74:2, May, 1984, p. 408–420.
- “Speculating About the Recent Speculation Against the Hong Kong Dollar,” (with D.T. Beers and N. Wallace), Federal Reserve Bank of Minneapolis *Quarterly Review*, 7:4, Fall, 1983, p. 14–22. (Reprinted in *REI*, p. 191–208).
- “Comment on G. Ortiz’s ‘Dollarization in Mexico: Causes and Consequences,’ ” in *Financial Policies and The World Capital Market: The Problem of Latin American Countries*, ed. by P. Aspe-Armella, R. Dornbusch and M. Obstfeld, University of Chicago Press, for the NBER, 1983, p. 95–106.
- “Stopping Moderate Inflation: The Methods of Poincaré and Thatcher,” in: *Inflation, Debt and Indexation*, ed. by R. Dornbusch and M. Simonsen, MIT Press, 1983, p. 54–98. (Also in: *Economic Policy in the U.K.: Proceedings of a Conference*, General Mills Foundation and University of Minnesota, June, 1981, p. 1–37) (reprinted in *REI*, p. 110–157).
- “The Ends of Four Big Inflation,” in: *Inflation: Causes and Effects*, ed. by Robert E. Hall, University of Chicago Press, for the NBER, 1983, p. 41–97. (Reprinted in *REI*, p. 40–109).
- “A Model of Commodity Money,” (with N. Wallace), *Journal of Monetary Economics*, 12:1, July, 1983, p. 163–87. (FRB Mpls Staff Report No. 85, Jan., 1983).
- “The Dimensionality of the Aliasing Problem in Models With Rational Spectral Densities,” (with L.P. Hansen), *Econometrica*, 51:2, Mar., 1983, p. 377–88. (FRB Mpls Staff Report No. 72, Sept., 1981).
- “Aggregation Over Time and the Inverse Optimal Predictor Problem for Adaptive Expectations in Continuous Time,” (with L.P. Hansen), *International Economic Review*, 24:1, Feb., 1983, p. 1–20. (FRB Mpls Staff Report No. 74, Sept., 1981).
- “The Real Bills Doctrine vs. the Quantity Theory: A Reconsideration,” (with N. Wallace), *Journal of Political Economy*, 90:6, Dec., 1982, p. 1212–36. (FRB Mpls Staff Report No. 64, Jan., 1981).

- “Instrumental Variables Procedures for Estimating Linear Rational Expectations Model,” (with L.P. Hansen), *Journal of Monetary Economics*, 9:3, May, 1982, p. 263–96. (FRB Mpls Staff Report No. 70, Sept., 1981).
- “Beyond Supply and Demand Curves in Macroeconomics,” *American Economic Review*, 72:2, May, 1982, p. 382–89. (FRB Mpls Staff Report No. 77, Feb., 1982).
- “Some Unpleasant Monetarist Arithmetic,” (with N. Wallace), Federal Reserve Bank of Minneapolis *Quarterly Review*, 5:3, Fall, 1981, p. 1–17. (Reprinted in: *Monetarism in the United Kingdom*, ed. B. Griffith and G.E. Wood, London: Macmillan, 1984, p. 15–41; also reprinted in : FRB *Quarterly Review*, 9:1, Winter, 1985, p. 15–31). (Reprinted in *REI*, p. 158–190).
- “A Note on Wiener-Kolmogorov Prediction Formulas for Rational Expectations Model,” (with L.P. Hansen), *Economics Letters*, 8:3, 1981, p. 255–60. (FRB Mpls Staff Report No. 69, Sept., 1981).
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- “Interpreting Economic Time Series,” *Journal of Political Economy*, 89:2, April, 1981, p. 213–48. (FRB Mpls Staff Report No. 58, April, 1980).
- “Tobin’s ‘q’ and the Rate of Investment in General Equilibrium,” in *On The State of Macroeconomics*, (Carnegie-Rochester No. 12) ed. by K. Brunner and A. Meltzer, North-Holland, 1980, p. 107–54. (FRB Mpls Staff Report No. 40, Jan., 1979).
- “Rational Expectations and the Reconstruction of Macroeconomics,” Federal Reserve Bank of Minneapolis *Quarterly Review* 4:3, Summer, 1980, p. 15–19. (Reprinted in *REI*, p. 1–18).
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- “The Demand for Money During Hyperinflations Under Rational Expectations II,” (with M. Salemi), *International Economic Review*, 20:3, Oct., 1979, p. 741–58. (FRB Mpls Working Paper No. 60, Feb., 1976).
- “Estimating Vector Autoregressions Using Methods Not Based on Explicit Economic Theories,” Federal Reserve Bank of Minneapolis *Quarterly Review* 3:3, Summer, 1979, p. 8–15.
- “After Keynesian Macroeconomics,” (with R.E. Lucas, Jr.), Federal Reserve Bank of Minneapolis *Quarterly Review*, 3:2, Spring, 1979. p. 1–16; Reprinted in: *After the Phillips Curve: Persistence of High Inflation and High Unemployment*, Federal Reserve Bank of Boston Conference Series No. 19, 1979, p. 49–72, With a Response to a Comment by B. Friedman, p. 81–82. (Reprinted in *REEP* , Vol. 1, p. 295–319).
- “Causality, Exogeneity, and Natural Rate Models: Reply to C.R. Nelson and B.T. McCallum,” *Journal of Political Economy*, 87:2, April, 1979, p. 403–09.
- “A Note on Maximum Likelihood Estimation of the Rational Expectations Model of The Term Structure,” *Journal of Monetary Economics* 5:1, Jan., 1979, p. 133–43. (FRB Mpls Staff Report No. 26, Sept., 1977; Reprinted in *REEP*, Vol. 2, p. 453–62).
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- “Estimation of Dynamic Labor Demand Schedules Under Rational Expectations,” *Journal of Political Economy*, 86:6, Dec., 1978, p. 1009–44. (FRB Mpls Staff Report No. 27, Sept., 1977; Reprinted in *REEP*, Vol. 2, p. 463–99).
- “Rational Expectations, Econometric Exogeneity, and Consumption,” *Journal of Political Economy*, 86:4, Aug., 1978, p. 673–700. (FRB Mpls Staff Report No. 25, Sept., 1977).
- “Seasonality and Portfolio Balance Under Rational Expectations,” (with R. Saracoglu), *Journal of Monetary Economics*, 4:3, Aug., 1978, p. 435–58. (FRB Mpls Working Paper No. 58, May, 1976).

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- “Response to Gordon and Ando,” in: *New Methods in Bus. Cycle Research*, p. 213-7.
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