

# Christopher D. Carroll

Professor of Economics  
Department of Economics  
Johns Hopkins University  
Baltimore, MD 21218-2685  
<http://econ.jhu.edu/people/ccarroll>

410-516-7602 (o)  
410-516-7600 (f)  
[ccarroll@jhu.edu](mailto:ccarroll@jhu.edu)

## Education

BA in Economics, *magna cum laude*, Harvard College, 1986.

Honors: Early selection to Phi Beta Kappa, 1985.  
John Harvard Scholarship 1982-1986.

PhD in Economics, Massachusetts Institute of Technology, 1990.

Honors: National Science Foundation Graduate Fellowship  
Fields: Macroeconomics, Public Finance

## Current Appointments

2016-present National Bureau of Economic Research, Research Associate  
2001-present Professor of Economics, Johns Hopkins University  
2001-present National Bureau of Economic Research, Research Associate  
2000-present Member, Conference on Research in Income and Wealth  
2006-present Member, *Center for Financial Studies, Goethe University, Frankfurt*

## Previous Appointments and Visiting Positions

- 2014-2015 Chief Economist and Director, Office of Research, CFPB
- 2011-2014 National Bureau of Economic Research, Governing Board Member
- 2010-Fall Visiting Professor, University College, London (2010-10 to 2010-11)
- 2010-Fall Visiting Professor, Einaudi Institute, Rome (2010-11 to 2010-12)
- 2009-2010 Senior Economist, President's Council of Economic Advisers
- 2002-Fall Visiting Professor, European University Institute, Florence
- 1999-Fall Visiting Fellow, Center on Social and Economic Dynamics, Brookings Institution
- 1997-1998 Senior Economist, President's Council of Economic Advisers
- 1996-2001 Associate Professor of Economics, Johns Hopkins University
- 1995-1996 Assistant Professor of Economics, Johns Hopkins University
- 1995-2001 National Bureau of Economic Research, Faculty Research Fellow
- 1990-1995 Staff Economist, Board of Governors of the Federal Reserve System

## Professional Honors

- 1998 Paul Samuelson Certificate of Excellence, Research on Lifetime Financial Security
- 1997 Alfred P. Sloan Early Career Research Fellowship

## Distinguished Lectures

- 2019-12 Keynote Address: Dublin, 6th Conference on Household Finance and Consumption, European Central Bank, "HFCS: Future of Macroeconomics! (If ...)"
- 2019-06 Keynote Address: London, Heads of Research of the European Central Banks, "Heterogeneity and Macro Policy"
- 2018-09 Keynote Address: Stockholm, Swedish Riksbank, Conference on "Housing, Credit, and Heterogeneity", "Housing and Heterogeneity: A Narrative and an Agenda"
- 2017-12 Keynote Address: Wellington, Reserve Bank of New Zealand, "The 'Normal Science' of Heterogeneous Agent Macroeconomics" at Housing, Housing Debt, and Policy
- 2017-12 Keynote Address: Sydney, Reserve Bank of Australia, "The Distribution of Wealth and the Marginal Propensity to Consume"
- 2017-09 Keynote Address: Washington, U.S. Treasury, "Heterogeneity, Macroeconomics, and Reality" at conference on "Heterogeneous Agents and Agent Based Modeling" sponsored by the U.S. Department of the Treasury, Office of Financial Research; Bank of England; and the Sloan Foundation

- 2016-09 Keynote Address: Yerevan, IMF Annual Conference on Advances in Economic Modeling, “The Distribution of Wealth and the MPC”
- 2012-06 Public Lecture: At the Computing in Economics and Finance conference in Prague in July, special pre-conference lecture on “Structural Estimation of Dynamic Stochastic Optimizing Intertemporal Choice Microeconomic Models for Dummies”

### **Other Professional Activities from July 2010**

- 2020-04 Seminar: Federal Reserve, “Consumption Effects of the CARES Act” (Zoom)
- 2020-05 Seminar: International Monetary Fund, “Consumption Effects of the CARES Act” (Zoom)
- 2020-03 Seminar: Norges Bank, Visiting Scholar
- 2020-01 Seminar: Seminar, University of Oslo, “Sticky Expectations and Consumption Dynamics”
- 2019-08 Short Course: Budapest Summer School for Central Bankers, 1 week intensive course, “Hands-On Heterogeneous Agent Macroeconomics”
- 2019-07 Conference Presentation: Austin, TX; SciPy: Scientific Computing With Python, “Birds of a Feather” presentation (with Shauna Gordon-McKeon)
- 2019-05 Seminar: University of Maryland, “Sticky Expectations and Consumption Dynamics”
- 2019-03 Seminar: Oslo, Norges Bank and Statistics Norway, “Days of Statistics” (Invited visitor)
- 2018-12 Conference Presentation: Frankfurt, European Central Bank, Household Heterogeneity in Macroeconomics, “Sticky Expectations and Consumption Dynamics”
- 2018-10 Conference Organizer: Sicily, CEPR European Conference on Household Finance, Organizer and Panelist “Robo-Advisors: Promises and Pitfalls”
- 2018-08 Short Course: Chicago, Open Source Macro Bootcamp, Introduction to the Economics ARK Toolkit
- 2018-07 Discussion: Cambridge, NBER Behavioral Macroeconomics, “Overpersistence Bias in Individual Income Expectations”
- 2018-06 Tutorial: Milan, *Computing in Economics and Finance*, “Economics Open-Source Software Developers Summit”

- 2018-06 Conference Presentation: Venice Summer Institute CESifo Conference “Expectation Formation”, “Sticky Expectations and Consumption Dynamics”
- 2018-06 Seminar: London, Bank of England Research Department, “Sticky Expectations and Consumption Dynamics”
- 2018-06 Tutorial: London, Bank of England Research Department, Introduction to the Economics ARK Toolkit
- 2018-05 Seminar: Frankfurt, Goethe University House of Finance, “Sticky Expectations and Consumption Dynamics”
- 2018-05 Short Course: Frankfurt, Goethe University House of Finance, Introduction to the Economics ARK Toolkit
- 2018-05 Tutorial: Frankfurt, Bundesbank International Conference on Household Finance, Introduction to the Economics ARK Toolkit
- 2018-05 Conference Presentation: Frankfurt, Bundesbank International Conference on Household Finance, “Sticky Expectations and Consumption Dynamics”
- 2018-05 Tutorial: Frankfurt, European Central Bank, Conference on the Microfoundations of Macroeconomics, Introduction to the Economics ARK Toolkit
- 2018-05 Conference: Washington, CFPB, Third Annual Consumer Financial Protection Bureau Conference
- 2018-04 Conference: Washington, IMF, The Macroeconomics of Artificial Intelligence
- 2018-03 Tutorial: George Mason University Department of Computational Social Science, Introduction to the Economics ARK Toolkit
- 2018-03 Service: Washington, Brookings Papers on Economic Activity, Panel Member
- 2018-02 Seminar: University of Delaware, “Sticky Expectations and Consumption Dynamics”
- 2018-01 Tutorial: Washington, IMF, Introduction to the Economics ARK Toolkit
- 2017-12 Tutorial: Sydney, Reserve Bank of Australia, Introduction to the Economics ARK Toolkit
- 2017-12 Seminar: Canberra, Australian National University (Canberra), Department of Economics, “The Distribution of Wealth and the Marginal Propensity to Consume”

- 2017-10 Seminar: Oslo, Norges Bank, “Sticky Expectations and Consumption Dynamics”
- 2017-10 Conference Presentation: Copenhagen, Danmarks Riksbank, *Heterogeneity in Firms, Households, and Financial Intermediaries*, “Sticky Expectations and Consumption Dynamics”
- 2017-09 Service: Washington, Brookings Papers on Economic Activity, Panel Member
- 2017-07 Conference Organizer: Cambridge, NBER Summer Institute, *Aggregate Implications of Microeconomic Consumption Behavior*
- 2017-07 Discussion: Cambridge, NBER Conference on Behavioral Macroeconomics, House Price Beliefs and Mortgage Level Choice
- 2017-06 Grant Awarded: Awarded 3-year Sloan Foundation Grant for Econ-ARK.org toolkit for open source structural macroeconomic modeling
- 2017-06 Tutorial: Washington, Federal Reserve Board of Governors, Introduction to the Economics ARK Toolkit
- 2017-06 Tutorial: Venice, CESifo Conference: New Evidence on Consumption, Household Behavior, and Inequality, Introduction to the Economics ARK Toolkit
- 2017-06 Discussion: Venice, CESifo, MPC Heterogeneity and Household Balance Sheets
- 2017-04 Published Discussion: Cambridge, *32nd NBER Macroeconomics Annual Conference*, “When Does Inequality Matter for Macro and When Does Macro Matter for Inequality?”
- 2017-03 Service: Washington, Brookings Papers on Economic Activity, Panel Member
- 2017-01 Discussion: San Francisco, ASSA meetings, “Parameter Estimation Using On-Line Household Surveys”
- 2016-09 Service: Washington, Brookings Papers on Economic Activity, Panel Member
- 2016-07 Conference Organizer: Cambridge, NBER Summer Institute, *Aggregate Implications of Microeconomic Consumption Behavior*
- 2016-06 Tutorial: Society for Computational Economics, Introduction to the Economics ARK Toolkit
- 2016-03 Service: Washington, Brookings Papers on Economic Activity, Panel Member

- 2016-01 Discussion: ‘[Do Banks Pass Through Credit Expansions to Consumers Who Want to Borrow?](#)’ at *Economic Fluctuations and Growth* conference, Federal Reserve Bank of San Francisco
- 2013-06 Seminar: Luxembourg School of Finance, *The Distribution of Wealth and the Marginal Propensity to Consume*
- 2013-06 Discussion: Ann Arbor, University of Michigan, Conference on Consumption Questions in the Panel Study of Income Dynamics, Discusant of Multiple Measures of Consumption, Demand Analysis and the Evolution of Consumption Inequality by Attanasio and Pistaferri
- 2013-06 Short Course: Oslo, Norges Bank and NHH Bergen, “Consumption and Heterogeneity”
- 2013-06 Conference Presentation: Washington, IMF and Paris School of Economics, “Workshop: Advances in Numerical Methods for Economics,” Washington DC, “The Method of Moderation”
- 2013-03 Discussion: San Francisco Fed, NBER *Economic Fluctuations and Growth* conference, “Active Vs. Passive Decisions And Crowd-Out In Retirement Savings Accounts: Evidence From Denmark”
- 2013-01 Conference Presentation: San Diego, ASSA Meetings, “Dissecting Saving Dynamics”
- 2012-11 Seminar: Washington, Federal Reserve Board, “Buffer Stock Saving in a Krusell-Smith World”
- 2012-11 Seminar: Washington, Consumer Financial Protection Bureau, “Buffer Stock Saving in a Krusell-Smith World”
- 2012-10 Discussion: UC Davis, Conference on “Household Finance”, “Trickle Down Consumption” by Marianne Bertrand and Adair Morse
- 2012-09 Service: Directors Meeting, National Bureau of Economic Research
- 2012-09 Service: Washington, Brookings Papers on Economic Activity, Panel Member
- 2012-08 Conference Presentation: Presented “*Representing Consumption and Saving Without A Representative Consumer*” at NBER-CRIW Conference “Measuring Economic Stability and Progress,” Cambridge MA
- 2012-07 Conference Organizer: Cambridge, NBER Summer Institute, *Aggregate Implications of Microeconomic Consumption Behavior*
- 2012-06 Seminar: Bank of England, “Dissecting Saving Dynamics”
- 2012-06 Conference Presentation: *Society for Economic Dynamics*, Cyprus

- 2012-06 Conference Presentation: “The Method of Moderation for Solving Dynamic Stochastic Optimization Problems” at *Society for Economic Dynamics*, Cyprus
- 2012-06 Conference Presentation: “The Method of Moderation for Solving Dynamic Stochastic Optimization Problems” at *Computing in Economics and Finance*, Prague
- 2012-04 Service: Directors Meeting, National Bureau of Economic Research
- 2012-03 Service: Washington, Brookings Papers on Economic Activity, Panel Member
- 2012-03 Service: Washington, Federal Reserve Board Academic Consultants’ Meeting, <http://econ.jhu.edu/people/ccarroll/papers/W-Hetero-Fed.pdf>
- 2012-03 Conference Presentation: Presented “Dissecting Saving Dynamics” at *Structural and Cyclical Elements in Macroeconomics* at the Federal Reserve Bank of San Francisco
- 2012-01 Discussion: ASSA Meetings, discussed “Risk Attitude and Housing Wealth Effect”
- 2011-12 Seminar: University of Houston, “Buffer Stock Saving in a Krusell-Smith World”
- 2011-12 Seminar: Congressional Budget Office, “Dissecting Saving Dynamics”
- 2011-12 Conference Organizer: NBER/CRIW research volume on “Improving the Measurement of Consumer Expenditures” (with John Sabelhaus of the Federal Reserve and Thomas Crossley of Cambridge University (UK)) (Conference date: 2011-12-02/03; published 2015)
- 2011-11 Service: Incoming representative for American Statistical Association on the board of directors of the National Bureau of Economic Research (5-year term beginning late 2011)
- 2011-10 Seminar: Federal Reserve Bank of Chicago, “Buffer Stock Saving in a Krusell-Smith World”
- 2011-09 Conference Presentation: “A Tractable Model of Precautionary Reserves, Net Foreign Assets, or Sovereign Wealth Funds” at NBER Conference on the Chinese Economy
- 2011-07 Conference Organizer: Cambridge, NBER Summer Institute, *Aggregate Implications of Microeconomic Consumption Behavior*
- 2011-06 Other: Visiting Scholar, Collegio Carlo Alberto (Turin, Italy), 2011-06-24 to 2011-06-25

- 2011-06 Other: Visiting Scholar, Bank of England (London), 2011-06-20 to 2011-06-23
- 2011-05 Service: Service on NSF-Census Research Network selection panel for location of new Census research nodes (Google “NSF-Census Research Network nsf 10621”), 2011-05
- 2011-05 Seminar: Boston College, “Buffer Stock Saving in a Krusell-Smith World”
- 2011-03 Service: *American Economic Journal: Macroeconomics*, Editor Selection Committee, 2011-Spring
- 2011-03 Conference Organizer: *Berkeley Electronic Journal of Macroeconomics/San Francisco Fed* conference on *Empirical Macroeconomics Using Geographical Data*
- 2011-02 Service: Testimony to Committee on National Statistics Panel on re-design of the Consumer Expenditure Survey (2011-02)
- 2011-01 Seminar: European University Institute (Florence); Universita La Sapienza (Rome)
- 2011-01 Discussion: Plenary Panel Discussant, Conference on Economic Analysis of Risk, Denver Colorado, 2011-01
- 2011-01 Discussion: ASSA meetings, “Empirical Macroeconomics” session; presentation at panel on “New Approaches to Measuring Household-Level Finances”
- 2010-12 Seminar: Einaudi Institute (Rome); University of Naples, Milano Bicocca, Bocconi University (Milan), University of Bologna
- 2010-11 Seminar: University College London, Bank of England, Chinese University of Hong Kong, Federal Reserve Bank of Richmond
- 2010-11 Discussion: Discussion of paper “The Effects of Fiscal Stimulus: Evidence from the 2009 ‘Cash for Clunkers’ Program” by Atif Mian and Amir Sufi at NBER Monetary Economics meetings, Cambridge MA
- 2010-11 Conference: Washington, Federal Reserve Board, Conference on Measurement of Household Wealth
- 2010-10 Seminar: Oxford University, Cambridge University, Institute for Fiscal Studies (London)
- 2010-09 Seminar: OxCARRE 4th Annual Conference, Oxford University
- 2010-09 Discussion: Paper discussion at Center for Financial Studies conference on household finance in Athens

2010-07 Conference Organizer: Cambridge, NBER Summer Institute, *Aggregate Implications of Microeconomic Consumption Behavior*

## **Refereeing and Kindred Activities**

American Economic Review, Quarterly Journal of Economics, Econometrica, Journal of Political Economy, Journal of Economic Literature, Journal of Monetary Economics, Review of Economics and Statistics, Review of Economic Studies, Journal of Business and Economic Statistics, Journal of Macroeconomics, Journal of Development Economics, Journal of Public Finance, Economic Development and Cultural Change, Sloan Foundation, U.K. Financial Conduct Authority, and others.

Panelist for *Brookings Papers on Economic Activity*, most BPEA meetings since 2006 (except 2009-10 when serving at Council of Economic Advisers and 2014-15 when serving as Chief Economist at the Consumer Financial Protection Bureau)

Grant proposal reviews: National Science Foundation, Sloan Foundation, UK Economic and Social Research Council (equivalent of NSF), Israeli Science Foundation, Smith Richardson Foundation, many others

## **Teaching**

Graduate Macroeconomic Theory Lecture Notes: Intertemporal Choice  
Advanced Topics in Macroeconomics (First year PhD)  
Advanced Topics in Macroeconomics II (Second year PhD)  
Undergraduate Public Finance  
Mathematical Methods for Economics, Part II  
Graduate Macroeconomics Seminar  
Graduate Lecture Notes Online

## **University and Departmental Service**

JHU Economics PhD Placement Director, 2002-2013; 2016-Present

JHU Faculty Advisory Committee, 2016-Present

Member, Undergraduate Ethics Board (1998-2001)

Dissertation Committees

**Chair:** Elif Arbatli, Danny Barth, Edmund Crawley, Burcu Duygan, Wendy Dunn, Michael Fratantoni, Johanna Francis, Daniel Garcia, Christopher Geiregat, Joseph Gruber, Farhan Hameed, Kareem Ismail, Shujaat Khan,

Kevin Moore, Misuzu Otsuka, Jiri Slacalek, Kiichi Tokuoka, Martin Sommer, Delia Velculescu, Weifeng Wu, Huiyan Lawrence Zhang, Xia Zhou

**Second Advisor:** Danny Barth, Eugenio Cerutti, Selim Elekdag, Jacques Miniane, Matt Raskin, Matthew White

**Peripheral Advisor:** Kenji Abe, Witold Czubala, Gergana Danilova-Trainor, Arash Sotoodehnia, Manu De Veirman

## \*Published and Forthcoming Papers

Christopher D Carroll, Edmund Crawley, Jiri Slacalek, and Matthew N White. “Modeling the consumption response to the CARES Act.” Technical report National Bureau of Economic Research 2020a. Forthcoming, *International Journal of Central Banking*, March 2021

“Theoretical Foundations of Buffer Stock Saving.” Christopher D. Carroll. *Quantitative Economics* Forthcoming

“Sticky Expectations and Consumption Dynamics.” Christopher D. Carroll, Edmund Crawley, Jiri Slacalek, Kiichi Tokuoka, and Matthew N. White. *American Economic Journal: Macroeconomics* 12(3):40–76 July 2020b

“The Econ-ARK and HARK: Open Source Tools for Computational Economics.” Christopher D. Carroll, Alexander M. Kaufman, Jacqueline L. Kazil, Nathan M. Palmer, and Matthew N. White. In Fatih Akici, David Lippa, Dillon Niederhut, and M Pacer, editors, *Proceedings of the 17th Python in Science Conference* pages 25 – 30 2018. doi: [10.5281/zenodo.1001067](https://doi.org/10.5281/zenodo.1001067)

“The Distribution of Wealth and the Marginal Propensity to Consume.” Christopher D. Carroll, Jiri Slacalek, Kiichi Tokuoka, and Matthew N. White. *Quantitative Economics* 8:977–1020 November 2017. At <http://econ.jhu.edu/people/ccarroll/papers/cstwMPC>

“Buffer-Stock Saving in a Krusell–Smith World.” Christopher D Carroll, Jiri Slacalek, and Kiichi Tokuoka. *Economics Letters* 132:97–100 2015a. At <http://econ.jhu.edu/people/ccarroll/papers/cstKS/>; extended version available as ECB Working Paper number 1633, <https://www.ecb.europa.eu/pub/pdf/scpwps/ecbwp1633.pdf>

“Representing Consumption and Saving Without a Representative Consumer.” Christopher D. Carroll. In *Measuring Economic Sustainability and Progress* NBER-CRIW Studies in Income and Wealth. University of Chicago Press 2014. At <http://econ.jhu.edu/people/ccarroll/papers/RepresentingWithoutRA/>

“The Distribution of Wealth and the MPC: Implications of New European Data.” Christopher D. Carroll, Jiri Slacalek, and Kiichi Tokuoka. *The American Economic Review* 104 (5):107–111 2014. At <http://econ.jhu.edu/people/ccarroll/papers/cstMPCxc>

*Improving the Measurement of Consumer Expenditures*. Christopher Carroll, Thomas Crossley, and John Sabelhaus, editors volume 74 of *NBER-CRIW Series in Income and Wealth*. University of Chicago Press 2015b

- “The Benefits of Panel Data in Consumer Expenditure Surveys.” Jonathan A. Parker, Nicholas S. Souleles, and Christopher D. Carroll. In Carroll et al. (2015b). Final version at <http://econ.jhu.edu/people/ccarroll/papers/ParkerSoulelesCarroll/>
- “International Evidence on Sticky Consumption Growth.” Christopher D. Carroll, Martin Sommer, and Jiri Slacalek. *Review of Economics and Statistics* 93(4):1135–1145 October 2011. <http://econ.jhu.edu/people/ccarroll/papers/cssIntlStickyC/>
- “How Large Is the Housing Wealth Effect? A New Approach.” Christopher D. Carroll, Jiri Slacalek, and Misuzu Otsuka. *NBER Working Paper Number 12746* December 2006. <http://www.nber.org/papers/w12746>
- “Precautionary Saving and the Marginal Propensity to Consume Out of Permanent Income.” Christopher D. Carroll. *Journal of Monetary Economics* 56(6):780–790 September 2009. <http://econ.jhu.edu/people/ccarroll/papers/MPCPerm>
- “Recent Stock Declines: Panic or the Purge of ‘Irrational Exuberance’?.” Christopher D. Carroll. *The Economists’ Voice* 5 2008. <http://econ.jhu.edu/people/ccarroll/opinion/CampbellShillerReduxFinal.pdf>
- “Precautionary Saving and Precautionary Wealth.” Christopher D. Carroll and Miles S. Kimball. *Palgrave Dictionary of Economics and Finance, 2nd Ed.* 2007. <http://econ.jhu.edu/people/ccarroll/papers/PalgravePrecautionary.pdf>
- “The Method of Endogenous Gridpoints for Solving Dynamic Stochastic Optimization Problems.” Christopher D. Carroll. *Economics Letters* 91(3):312–320 September 2006a. <http://econ.jhu.edu/people/ccarroll/EndogenousGridpoints.pdf>
- “The Epidemiology of Macroeconomic Expectations.” Christopher D. Carroll. In Larry Blume and Steven Durlauf, editors, *The Economy as an Evolving Complex System, III*. Oxford University Press 2006b. [PDF],[Code]
- “Unemployment Risk and Precautionary Wealth: Evidence from Households’ Balance Sheets.” Christopher D. Carroll, Karen E. Dynan, and Spencer S. Krane. *Review of Economics and Statistics* 85(3) August 2003. <http://econ.jhu.edu/people/ccarroll/krynoll.pdf>
- “Macroeconomic Expectations of Households and Professional Forecasters.” Christopher D. Carroll. *Quarterly Journal of Economics* 118(1):269–298 2003. [PDF],[Code]
- “Portfolios of the Rich.” Christopher D. Carroll. In *Household Portfolios: Theory and Evidence*. MIT Press Cambridge, MA 2002. <http://econ.jhu.edu/people/ccarroll/richportfolios.pdf>
- “A Theory of the Consumption Function, With and Without Liquidity Constraints.” Christopher D. Carroll. *Journal of Economic Perspectives* 15(3):23–46 Summer 2001a. <http://econ.jhu.edu/people/ccarroll/ATheoryv3JEP.pdf>

- “Death to the Log-Linearized Consumption Euler Equation! (And Very Poor Health to the Second-Order Approximation).” Christopher D. Carroll. *Advances in Macroeconomics* 1(1):Article 6 2001b
- “Individual Learning About Consumption.” Todd M. Allen and Christopher D. Carroll. *Macroeconomic Dynamics* 5(4) 2001. <http://econ.jhu.edu/people/ccarroll/IndivLearningAboutC.pdf>
- “‘Risky Habits’ and the Marginal Propensity to Consume Out of Permanent Income.” Christopher D. Carroll. *International Economic Journal* 14(4):1–41 2000a. <http://econ.jhu.edu/people/ccarroll/riskyhabits.pdf>
- “Solving Consumption Models with Multiplicative Habits.” Christopher D. Carroll. *Economics Letters* 68(1):67–77 2000b. <http://econ.jhu.edu/people/ccarroll/HabitsEconLett.pdf>
- “Saving and Growth with Habit Formation.” Christopher D. Carroll, Jody R. Overland, and David N. Weil. *American Economic Review* 90(3):341–355 June 2000. <http://econ.jhu.edu/people/ccarroll/AERHabits.pdf>
- “Requiem for the Representative Consumer? Aggregate Implications of Microeconomic Consumption Behavior.” Christopher D. Carroll. *American Economic Review* 90(2): 110–115 May 2000c. At <http://econ.jhu.edu/people/ccarroll/RequiemFull.pdf>
- “Why Do the Rich Save So Much?.” Christopher D. Carroll. In Joel B. Slemrod, editor, *Does Atlas Shrug? The Economic Consequences of Taxing the Rich*. Harvard University Press 2000d. <http://econ.jhu.edu/people/ccarroll/Why.pdf>
- “Does Cultural Origin Affect Saving Behavior? Evidence from Immigrants.” Christopher D. Carroll, Changyong Rhee, and Byungkun Rhee. *Economic Development and Cultural Change* 48(1):33–50 October 1999. <http://econ.jhu.edu/people/ccarroll/censave.pdf>
- “How Important Is Precautionary Saving?.” Christopher D. Carroll and Andrew A. Samwick. *Review of Economics and Statistics* 80(3):410–419 August 1998. <http://econ.jhu.edu/people/ccarroll/papers/howbig.pdf>
- “Comparison Utility in a Growth Model.” Christopher D. Carroll, Jody R. Overland, and David N. Weil. *Journal of Economic Growth* 2(4):339–367 December 1997. <http://econ.jhu.edu/people/ccarroll/compare.pdf>
- “The Nature of Precautionary Wealth.” Christopher D. Carroll and Andrew A. Samwick. *Journal of Monetary Economics* 40(1):41–71 1997

- “Unemployment Expectations, Jumping (S,s) Triggers, and Household Balance Sheets.” Christopher D. Carroll and Wendy E. Dunn. In Benjamin S. Bernanke and Julio Rotemberg, editors, *NBER Macroeconomics Annual, 1997* pages 165–229. MIT Press Cambridge, MA 1997. <http://econ.jhu.edu/people/ccarroll/macroann.pdf>; Methodological Appendix: <http://econ.jhu.edu/people/ccarroll/methods3.pdf>; Empirical Results and Simulation Programs: <http://econ.jhu.edu/people/ccarroll/cdfiles.html>;
- “Buffer Stock Saving and the Life Cycle/Permanent Income Hypothesis.” Christopher D. Carroll. *Quarterly Journal of Economics* CXII(1):1–56 1997. <http://econ.jhu.edu/people/ccarroll/BSLCPIH.zip>
- “On the Concavity of the Consumption Function.” Christopher D. Carroll and Miles S. Kimball. *Econometrica* 64(4):981–992 1996. <http://econ.jhu.edu/people/ccarroll/concavity.pdf>
- “Does Consumer Sentiment Forecast Household Spending? If So, Why?.” Christopher D. Carroll, Jeffrey C. Fuhrer, and David W. Wilcox. *American Economic Review* 84(5):1397–1408 1994a. <http://econ.jhu.edu/people/ccarroll/SentAERC CarrollFuhrerWilcox.pdf>
- “Saving and Growth: A Reinterpretation.” Christopher D. Carroll and David N. Weil. *Carnegie-Rochester Conference Series on Public Policy* 40:133–192 June 1994. <http://econ.jhu.edu/people/ccarroll/CarrollWeilSavingAndGrowth.pdf>
- “Are There Cultural Effects on Saving? Some Cross-Sectional Evidence.” Christopher D. Carroll, Changyong Rhee, and Byungkun Rhee. *The Quarterly Journal of Economics* CIX(3):685–700 August 1994b. <http://econ.jhu.edu/people/ccarroll/crr-culture-qje.pdf>
- “How Does Future Income Affect Current Consumption?.” Christopher D. Carroll. *The Quarterly Journal of Economics* CIX(1):111–148 1994. <http://econ.jhu.edu/people/ccarroll/howdoesfuture.pdf>
- “The Decline in U.S. Saving.” Christopher D. Carroll. *Forum for Applied Research and Public Policy* 8(4) 1993
- “The Buffer-Stock Theory of Saving: Some Macroeconomic Evidence.” Christopher D. Carroll. *Brookings Papers on Economic Activity* 1992(2):61–156 1992. <http://econ.jhu.edu/people/ccarroll/BufferStockBPEA.pdf>
- “Why is U.S. National Saving So Low?.” Lawrence H. Summers and Christopher D. Carroll. *Brookings Papers on Economic Activity* 1987(2):607–636 1987. <http://econ.jhu.edu/people/ccarroll/NatSavSoLow.pdf>

“Why Have Private Saving Rates in the US and Canada Diverged?.” Christopher D. Carroll and Lawrence H. Summers. *Journal of Monetary Economics* 20(2):249–279 1987. <http://econ.jhu.edu/people/ccarroll/papers/CarrollSummersJME.pdf>

“Consumption Growth Parallels Income Growth: Some New Evidence.” Christopher D. Carroll and Lawrence H. Summers. In B. Douglas Bernheim and John B. Shoven, editors, *National Saving and Economic Performance*. Chicago University Press Chicago 1991. <http://econ.jhu.edu/people/ccarroll/papers/CParallelsY.pdf>

### **\*Book Reviews and Published Discussions**

Christopher D. Carroll and Edmund Crawley. “Discussion of ‘When Inequality Matters for Macro and Macro Matters for Inequality.’” Technical report NBER 2017

“Discussion of ‘The Rise in U.S. Household Indebtedness: Causes and Consequences’.” Christopher D. Carroll. In Christopher Kent, editor, *Financial Stability and the Economic System (Proceedings of a Conference at the Reserve Bank of Australia, August 22, 2007)* 2007. [http://www.rba.gov.au/PublicationsAndResearch/Conferences/2007/Dynan\\_Kohn\\_disc.pdf](http://www.rba.gov.au/PublicationsAndResearch/Conferences/2007/Dynan_Kohn_disc.pdf)

“Discussion of ‘Macroeconomic Derivatives: An Initial Analysis of Market-Based Macro Forecasts, Uncertainty, and Risk’ by Gurkaynak and Wolfers.” Christopher D. Carroll. In Jeffrey B. Frankel, editor, *NBER International Seminar on Macroeconomics*. MIT Press 2005. <http://econ.jhu.edu/people/ccarroll/discuss/ISOM/gw/2005-06.zip>

*The Economics of Saving and Growth: Theory, Evidence, and Implications for Policy*. Klaus Schmidt-Hebbel and Luis Servén, editors. Cambridge University Press for the World Bank 2000. Book Review, *Journal of Economic Literature*

“The Adequacy of Retirement Saving.” Eric Engen, William Gale, and Cori Uccello. *Brookings Papers on Economic Activity* 1999(2) 1999. Published Discussion

“Global Capital Shortages: Real Threat or Pure Fiction?.” OECD 1997. Book Review

“International Comparisons of Household Saving.” James M. Poterba 1996. . Book Review

“The Economics of Saving.” James H. Gapinsky 1994. Book Review

### **\*Unpublished Papers**

“Liquidity Constraints and Precautionary Saving.” Christopher D. Carroll, Martin Holm, and Miles S. Kimball. *Manuscript, Johns Hopkins University* 2019a. <http://www.econ2.jhu.edu/people/ccarroll/papers/LiqConstr>

- “Dissecting Saving Dynamics: Measuring Wealth, Precautionary, and Credit Effects.” Christopher D. Carroll, Jiri Slacalek, and Martin Sommer. *Manuscript, Johns Hopkins University* 2019b. <http://econ.jhu.edu/people/ccarroll/papers/cssUSSaving/>
- “A Tractable Model of Precautionary Reserves, Net Foreign Assets, or Sovereign Wealth Funds.” Christopher D. Carroll and Olivier Jeanne. *NBER Working Paper Number 15228* August 2009. <http://econ.jhu.edu/people/ccarroll/papers/cjSOE>
- “A Tractable Model of Buffer Stock Saving.” Christopher D. Carroll and Patrick Toche. *NBER Working Paper Number 15265* August 2009. <http://econ.jhu.edu/people/ccarroll/papers/ctDiscrete>
- “Implications of Wealth Heterogeneity For Macroeconomics.” Christopher D. Carroll. *Johns Hopkins University Department of Economics Working Paper Number 597* May 2012. Paper for Academic Consultants’ Meeting, Board of Governors of the Federal Reserve System, available at <http://econ.jhu.edu/people/ccarroll/papers/W-Hetero-Fed.pdf>