#### **DEBORAH J. LUCAS**

Curriculum Vitae January, 2024

#### CONTACT INFORMATION

MIT Sloan School of Management 100 Main Street, E62-640 Cambridge, MA 02142-1347 dlucas@mit.edu

#### **EDUCATION**

B.A., Economics, University of Chicago, June 1980 M.A., Economics, University of Chicago, 1983 Ph.D., Economics, University of Chicago, June 1986

### SELECTED PROFESSIONAL APPOINTMENTS

Director, MIT Golub Center for Finance and Policy, 2012-present Sloan Distinguished Professor of Finance, Sloan School of Management, 2011-present Assistant Director, Financial Analysis Division, Congressional Budget Office 2010-2011 Associate Director, Congressional Budget Office 2009-2010 Professor of Finance, Sloan School of Management, 2009-2011 (on leave) Donald C. Clark HSBC Professor of Consumer Finance, Department of Finance, Kellogg School of Management, Northwestern University, 1996 - 2009. Chief Economist, Congressional Budget Office, 2000 – 2001. Member, Social Security Technical Advisory Panel, 1999 - 2000, and 2006 - 2007. Chairman, Department of Finance, Kellogg School of Management, 1996 – 1998. John L. and Helen Kellogg Distinguished Associate Professor, Department of Finance, Kellogg School of Management, Northwestern University. 1992 – 1996. NBER Research Associate, 1998 - present. Senior Fellow, Asian Bureau of Finance and Economic Research, 2018-present NBER Faculty Research Fellow, 1992 – 1998. Senior Staff Economist, Council of Economic Advisers, Washington, D.C., 1992 – 1993. Assistant Professor, Department of Finance, J.L. Kellogg School of Management, Northwestern University, 1985 - 1992. Visiting Assistant Professor, Department of Finance, Sloan School of Management, Massachusetts Institute of Technology, 1990 - 1991.

### **OTHER APPOINTMENTS**

Elected Fellow, National Academy of Public Administration, 2018-present
Member, Shadow Open Market Committee, November 2016- present
Member, Academic Research Council, Urban Institute Housing Finance Policy Center, 2014present
Trustee, NBER pension plans, 2011-present
Member National Academy of Social Insurance (elected), 2007-present
Term Professor, PBC School of Finance, Tsinghua University, 2018-2019, 2020-2021
Short-term Visiting Scholar, Federal Reserve Bank of Cleveland 2019, 2021
Member, Federal Economic Statistics Advisory Committee (FESAC), March 2015-2019
Advisory Roundtable of the Federal Reserve Bank of New York, January 2014-2020
Member, Financial Economists Roundtable 2012-2021
Member National Academy of Sciences Committee on the Long-Run Macroeconomic Implications of Population Aging, 2010-2012
Adviser to Congressional Oversight Panel on TARP, 2009
Periodic consultant to Congressional Budget Office, IMF, OECD

### **BOARD DIRECTORSHIPS**

P/E Investments 2022-present
CME Group, 2018-present
Anthracite Inc., 2005 - 2009. Chair audit.
General Dynamics, Inc., 2005 - 2009. Chair pensions and benefits.
Federal Home Loan Bank of Chicago, 2009
The Access Group, 1997 -2008, chair audit committee, 2003 – 2005, non-profit.
American Finance Association, 2003 – 2005.

#### FELLOWSHIPS AND AWARDS

Elected Fellow, National Academic of Public Administration, 2018 Q Group Best Paper prize 3rd place, 2018 Endowed chair (Sloan Distinguished Professor), 2011 Searle Foundation Research Grant, 2005 Elected member, National Academy of Social Insurance, 2003 Award for Management Excellence, Congressional Budget Office, 2001 Received endowed chair (Household International Professor of Consumer Finance) 1996 Received endowed chair (John L. and Helen Kellogg Distinguished Associate Professor of Finance) 1995 NSF Research Fellowship 1993-1995 Winner, best paper in the Review of Financial Studies 1991 Bradley Foundation Research Grant 1991 Nominated for "Teacher of the Year," 1991, 2006, 2012, 2015 NBER Research Fellow, 1991-present Winner Smith-Breeden prize (for one of best papers in the Journal of Finance 1990) First Chicago Research Chair 1989-1990 Winner Iddo Sarnat Award (for best paper in the Journal of Banking and Finance for 1987)

### EDITORIAL POSITIONS

Editorial Board, Annual Review of Financial Economics, 2011-present Associate Editor, American Economic Association – Policy, 2013-2021 Editorial Board, Journal of Financial Intermediation, 2015 Co-editor, Journal of Money, Credit and Banking, 2005-2009 Associate Editor, Econometrica, 2000-2003 Associate Editor, Review of Economics and Statistics, 2003 - 2008 Editorial Board, Journal of Financial Education, 2003 - 2005 Associate Editor, Journal of Money, Credit and Banking, 1996-2005 Associate Editor, Review of Financial Studies, 1993-1995

# COURSES TAUGHT

Fixed Income Securities and Derivatives (masters level)
Options and Futures (masters level)
Derivatives Markets: Advanced Modeling and Strategies (online MicroMasters program)
Financial Economics for Public Policy (executive education)
Corporate Finance I and II (masters and undergrad)
Advanced Derivatives (PhD)
Topics in Asset Pricing and Liquidity (PhD)
Dynamic Models of Asset Pricing (PhD)
Topics in Financial Policy (PhD)
Managerial Finance (executive MBA)
Credit Markets and Credit Policy (executive MBA)
Mission and Metrics (executive program for Federal Credit Program Managers)

### PAPERS AND BOOK CHAPTERS, PUBLISHED AND FORTHCOMING

"Reflections on What Financial Economics Can and Cannot Teach Us About the Social Discount Rate," *Annual Review of Financial Economics*, August 2023

"COVID-19 Credit Policies around the World: Size, Scope, Costs, and Consequences," (with Gee Hee Hong), *Brookings Papers on Economic Activity*, Spring 2023

"How Much Can Collective Defined Contribution Plans Improve Risk-Sharing? (with Daniel Smith), *Journal of Investment Management*, December 2020

"A Fair Value Approach to Valuing Public Infrastructure Projects and the Risk Transfer in Public Private Partnerships" (with Jorge Jimenez Montesinos), in *Economic Analysis and Infrastructure Investment* edited by Edward Glaeser and James Poterba, University of Chicago Press, March 2020

"The Student Loan Consolidation Option," (with Damien Moore), *Journal of Public Economics*, Volume 174, Pages 1-12, June 2019 (lead article)

"Measuring the Cost of Bailouts," *Annual Review of Financial Economics*, Vol. 11:85-108, November 2019

"Credit Policy as Fiscal Policy," Brookings Papers on Economic Activity, Spring 2016 (lead

article).

"Evaluating the Cost of Government Credit Support: The OECD Context," *Economic Policy*, Vol. 29, Issue 79, pp. 553-597, 2014

"Rebutting Arrow and Lind: Why Governments Should Use Market Rates for Discounting," *Journal of Natural Resources Policy Research*, Volume 6, Issue 1, 2014

"Federal Credit Programs," in <u>Public Economics in the United States: How the Federal</u> <u>Government Analyzes and Influences the Economy</u>, Vol.1, edited by Steven Payson, ABC-Clio/Praeger Publishers, 2014

"Valuation of Government Policies and Projects," Annual Review of Financial Economics, 2012

"Valuing Government Guarantees: Fannie and Freddie Revisited" (with Robert McDonald), in <u>Measuring and Managing Federal Financial Risk</u>, edited by D. Lucas, University of Chicago Press, 2010

"The Cost of Risk to the Government and Its Implications for Federal Budgeting" (with Marvin Phaup), in <u>Measuring and Managing Federal Financial Risk</u>, edited by D. Lucas, University of Chicago Press, 2010

"Guaranteed Versus Direct Lending: The Case of Student Loans" (with Damien Moore), in <u>Measuring and Managing Federal Financial Risk</u>, edited by D. Lucas, University of Chicago Press, 2010

"Is Mark-to-Market Accounting Destabilizing? Analysis and Implications for Policy" (with John Heaton and Robert McDonald), *Journal of Monetary Economics*, January, 2010.

"Heterogeneity and Portfolio Choice: Theory and Evidence" (with Stephanie Curcuru, John Heaton and Damien Moore), <u>The Handbook of Financial Econometrics</u>, Vol 1, North Holland, 2010.

"How Should Public Pension Plans Invest?" (with Stephen Zeldes), *American Economic Review* Papers and Proceedings, May, 2009.

"Reforming Credit Reform" (with Marvin Phaup), Public Budgeting & Finance, Winter 2008.

"Can Heterogeneity, Undiversified Risk, and Trading Frictions Solve the Equity Premium Puzzle?" (with John Heaton) <u>Handbook of Investments: Equity Risk Premium 1</u>, September 2007.

"An Options-Based Approach to Evaluating the Risk of Fannie Mae and Freddie Mac" (with Robert McDonald), *Journal of Monetary Economics*, 2006.

"Modeling the Effects of Fiscal Policy Imbalances – How Much Does Myopia Matter?" *Review of Economic Dynamics*, 2003.

"Asset Pricing and Portfolio Choice: The Role of Entrepreneurial Risk" (with John Heaton), *Journal of Finance*, 2000.

"Stock Prices and Fundamentals," (with John Heaton), NBER Macroeconomics Annual, 2000.

"Price and Interest Rate Dynamics Induced by Multiperiod Contracts," *North American Journal of Economics and Finance*, 2000.

"Portfolio Choice in the Presence of Background Risk," (with John Heaton), *Economic Journal*, 2000.

"Shareholder Heterogeneity, Adverse Selection, and Payout Policy," (with Robert McDonald), *Journal of Financial and Quantitative Analysis*, 1998.

"Market Frictions, Savings Behavior, and Portfolio Choice," (with John Heaton), *Macroeconomic Dynamics*, 1997.

"External Financing and Insurance Cycles" (with Anne Gron), NBER Conference Volume on Property Casualty Insurance, 1997.

"Evaluating the Effects of Incomplete Markets on Risk Sharing and Asset Pricing," (with John Heaton), *Journal of Political Economy*, 1996. Reprinted in <u>Incomplete Markets</u>, edited by Michael J.P. Magill, and Martine Quinzii, 2008.

"Managed Competition with Prefunding--The Solution for Long-term Care?" *The Milbank Quarterly*, November 1996.

"The Importance of Investor Heterogeneity and Financial Market Imperfections for the Behavior of Asset Prices" (with John Heaton), *Carnegie Rochester Papers*, 1995.

"Asset Pricing with Undiversifiable Income Risk and Short Sales Constraints: Deepening the Equity Premium Puzzle," *Journal of Monetary Economics*, December 1994.

"The Effects of Incomplete Insurance Markets and Trading Costs in a Consumption-Based Asset Pricing Model" (with John Heaton), *Journal of Economic Dynamics and Control*, 1992.

"Equity Issues with Time-Varying Asymmetric Information," (with Robert Korajczyk and Robert McDonald), *Journal of Financial and Quantitative Analysis*, 1992.

"Bank Financing and Investment Decisions with Asymmetric Information about Loan Quality," (with Robert McDonald), *Rand Journal*, Spring 1992.

"The Effect of Information Releases on the Pricing and Timing of Equity Issues," (with Robert Korajczyk and Robert McDonald), *Review of Financial Studies*, vol. 4, #4, 1991.

"The Variability of Velocity in Cash-in-Advance Models," *Journal of Political Economy*, (with Narayana Kocherlakota and Robert Hodrick), April 1991.

"Equity Issues and Stock Price Dynamics," *Journal of Finance*, Vol. 45, No. 4 (with Robert McDonald), 1990.

"Understanding the Behavior of Stock Prices around the Time of an Equity Issue," in Glenn Hubbard, ed., <u>Information, Capital Markets</u>, and <u>Investment</u>, University of Chicago Press, Chicago, IL. (with Robert Korajczyk and Robert McDonald), 1990.

"Bank Portfolio Choice with Private Information About Loan Quality: Theory and Implications for Regulation," *Journal of Banking and Finance* 11, 473-497 (with Robert McDonald), 1987.

### WORKING PAPERS

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"Evaluating the Costs of Government Credit Support Programs during COVID-19: International Evidence" (with Gee Hee Hong)

"Credit Risk Transfer and the Pricing of Mortgage Default Risk" (with Edward Golding)

"Hacking Reverse Mortgages"

"Inventory of Support for Fossil Fuels—Estimating the Support Component of Loan Guarantees and Preferential Loans" (report for OECD)

"Toward Comprehensive Measures of the Costs and Risks of Development Banks: The Case of the KDB" (with Sung Kwan Lee)

"Evaluating the Cost of Government Loan Guarantees for Fossil Fuel and Other Energy Projects," (prepared for the OECD Trade & Agriculture Directorate)

"Towards Fair Value Accounting for Public Pensions: The Case for Delinking Disclosure and Funding Requirements" slated for publication in Gathering Storm: The Risks of State Pension Underfunding

"Valuing and Hedging Defined Benefit Pension Obligations – The Role of Stocks Revisited" (with Stephen Zeldes)

Why Do Guaranteed SBA Loans Cost Borrowers So Much? (with Flavio de Andrade)

"Capital Structure, Hurdle Rates, and Portfolio Choice – Interactions in an Entrepreneurial Firm" (with John Heaton)

"Investing Public Pensions in the Stock Market: Implications for Risk Sharing and Asset Prices" (with John Heaton)

"Accrual Accounting for Federal Entitlements -- Issues and Estimates"

#### **GOVERNMENT PUBLICATIONS**

"Measuring the Systemic Importance of U.S. Bank Holding Companies," Testimony before the Senate Banking Committee, July 2015

"Keeping College Within Reach: Examining Opportunities to Strengthen Federal Student Loan Programs," Testimony before the Committee on Education and the Workforce, U.S. House of Representatives, 2013

"Fair-Value Accounting for Federal Credit Programs" (with Mark Hadley), Congressional Budget Office Issue Brief, March 2012

"Federal Loan Guarantees for the Construction of Nuclear Power Plants" (with Wendy Kiska), Congressional Budget Office Study, 2011

"The Budgetary Cost of Fannie Mae and Freddie Mac and Options for the Future Federal Role in the Secondary Mortgage Market," Testimony before the Committee on the Budget, U.S. House of Representatives, 2011

"An Evaluation of Large-Scale Mortgage Refinancing Programs" (with Damien Moore and Mitchell Remy), Congressional Budget Office working paper, 2011

"Fannie Mae, Freddie Mac and the Role of the Secondary Mortgage Market," (with David Torregrosa), Congressional Budget Office Study, 2010

"The Budgetary Impact and Subsidy Cost of the Federal Reserve's Activities During and Financial Crisis" (with Kim Kowalewski and Wendy Kiska), Congressional Budget Office, 2010

"Federal Financial Guarantees Under the Small Business Administration's 7(a) Program" (with Wendy Kiska, Congressional Budget Office Paper, October 2007

"Evaluating Benefit Guarantees in Social Security," (with Sven Sinclair, Amy Rehder Harris, Michael Simpson, and JulieTopoleski), Congressional Budget Office Background Paper, 2006

"The Risk Exposure of the Pension Benefit Guarantee Corporation" (with Wendy Kiska and Marvin Phaup) Congressional Budget Office Study, 2005

"Estimating the Value of Subsidies for Federal Loans and Loan Guarantees," (with Marvin Phaup and Ravi Prasad) Congressional Budget Office, 2004

"Evaluating and Accounting for Federal Investment in Corporate Stocks and Other Private Securities," (with Doug Hamilton and Marvin Phaup) Congressional Budget Office, 2003

"Federal Subsidies and the Housing GSEs," (with Marvin Phaup) Congressional Budget Office, 2001

## NOTES, REVIEWS, AND OTHER PUBLICATIONS

"Want to prevent another SVB? Have banks disclose their duration gap," (with Edward Golding), *American Banker* https://www.americanbanker.com/opinion/want-to-prevent-another-svb-have-banks-disclose-their-duration-gap

"Introduction to the ARFE Theme on the Social Discount Rate, *Annual Review of Financial Economics*, 2023

"Comment on 'Measuring U.S. Fiscal Capacity using Discounted Cash Flow Analysis by Zhengyang Jiang, Hanno Lustig, Stijn Van Nieuwerburgh, and Mindy Xiaolan,' Brookings Papers on Economic Activity, 2022 "Comment on 'The Sustainability of State and Local Government Pensions: A Public Finance Approach,' by Jamie Lenney, Byron Lutz, Finn Schuele, Louise Sheiner," Brookings Papers on Economic Activity, 2021

"Policy Rx for the Economy: Cash or Credit?" book chapter in *Impact of COVID-19 on Asian Economies and Policy Responses*, edited by Sumit Agarwal, Zhiguo He and Bernard Yeung, World Scientific Press, 2020

"Funding pandemic relief: Monetise now" (with Refet Gürkaynak), VoxEU, May 2020

"The Financial Crisis Bailouts: What They Cost Taxpayers and Who Reaped the Benefits," position paper for the Shadow Open Market Committee, September 2018, https://www.shadowfed.org/wp-content/uploads/2018/10/LucasSOMC-October2018.pdf

"Fiscal Consequences of the Federal Reserve's Balance Sheet," position paper for the Shadow Open Market Committee, Septemb er 2017, http://shadowfed.org/wp-content/uploads/2017/09/LucasSOMC September2017.pdf

"Valuing the GSEs' Government Support," position paper for the Shadow Open Market Committee, May 2017, http://shadowfed.org/wp-content/uploads/2017/05/LucasSOMC-May2017.pdf

" 'Truth is our only refuge': why the CBO must remain independent," The Conversation, Feb. 2015

"Putting an accurate price tag on government credit support," VOXeu, Dec. 2014

"Evaluating the Government as a Source of Systemic Risk," *Financial Perspectives*, Vol 2, Issue 3, 2014.

"Comment on 'Testing macroprudential stress Tests: The risk of regulatory risk weights,' by Viral Acharya, Robert Engle, and Diane Pierre," *Journal of Monetary Economics*, Vol 65, pp 54-56, 2014

Comment on "Effects of unconventional monetary policy on financial institutions' by Gabriel Chowdorow-Reich, *Brookings Papers on Economic Activity*, Spring, 2014

"Joint Risk of DB Pension Underfunding and Sponsor Termination: Incorporating Options-Based Projections and Valuations into PIMS," in report of the *Technical Review Panel for the Pension Insurance Modeling System (PIMS)*, 2013

"Comment on 'The Future of U.S. Housing Finance Reform' by Phillip Swagel," *The B.E. Journal of Macroeconomics*, Special Issue: Long-Term Effects of the Great Recession, Vol 12, Issue 3, 2012.

"The Federal Debt: Assessing the Capacity to Pay," in *Is the U.S. Government Debt Different*, F. Allen, A. Gelpern, C. Mooney, and D. Skeel (eds.), Philadelphia: FIC Press, 2012

Aging and the Macroeconomy. Long-Term Implications of an Older Population. Committee on the Long-Run Macro-Economic Effects of the Aging U.S. Population. Washington, DC: National Academy Press, 2012.

"Comment on 'Making Sense of the Subprime Crisis' by K. Gerardi, A. Lehnart, S. Sherland and P. Willen," *Brookings Papers on Economic Activities*, Fall 2008

"There's Just No Accounting for Federal Bailouts," editorial, Crain's Chicago Business, 2008

"Comment on 'Global Demographic Trends and Social Security Reform' by Orazio Attanasio, Sagiri Kitao, and Giovanni Violante," *Journal of Monetary Economics*, 2007

"Who Holds the Toxic Waste? An Investigation of MBS Holdings" (with Joseph Haubrich, Proceedings, 2006 Conference on Bank Structure and Competition, Federal Reserve Bank of Chicago

"Comment on 'On Asset-Liability Matching and Federal Deposit and Pension Insurance' by Zvi Bodie," Federal Reserve Bank of St. Louis *Review*, conference proceedings, July 2006

"Lessons from Market Efficiency" in Aspatore C-Level Business Intelligence, 2003

"Investing Public Pensions in the Stock Market: Implications for Risk Sharing, Capital Formation and Public Policy in the Developed and Developing World," *Sasin Journal of Management*, 2001

"Comment on 'The Social Security Trust Fund, the Riskless Interest Rate, and Capital Accumulation,' by Andrew B. Abel" in *Risk Aspects of Investment Based Social Security Reform*, NBER, 2000

"Comment on 'The Case for Indexed Government Debt' by John Campbell and Robert Shiller," 1996 NBER Macroeconomics Annual

"Comment on 'Financial Intermediation and Monetary Policy in a General Equilibrium Banking Model' by Pamela Labadie" *Journal of Money, Credit and Banking*, 1995

"Comment on 'A "Barter" Theory of Bank Regulation and Credit Allocation,' by Anjan Thakor and Jess Beltz" *Journal of Money, Credit and Banking*, 1994

"Asset Pricing with Incomplete Markets, A Survey," *Cuadernos Economicos de ICE*, vol. 50, 1992

"Foundations of the Cash-in-Advance Model" A review essay of <u>Finance Constraints and the</u> <u>Theory of Money</u> by S. C. Tsiang, *Journal of Monetary Economics*, vol. 27 no. 3, June 1991