Macro Financial Modeling
Summer Session
JUNE 18–22, 2017 | Bretton Woods, New Hampshire

MFM DIRECTORS
Lars Peter Hansen
University of Chicago
Andrew W. Lo
Massachusetts Institute of Technology

This research project is supported by generous grants from the Alfred P. Sloan Foundation, the CME Group Foundation, and Fidelity Management & Research Company.
Welcome

June 2017

Welcome to the second Macro Financial Modeling (MFM) Summer Session! It is our great pleasure to greet you.

Our MFM project has grown substantially from a small one-day conference convened in 2012 to a community of over 150 researchers. This week we’re proud to bring together fifty of the best of the next generation of economists with nineteen leaders in macroeconomics, finance, and financial regulation to learn, discuss, and collaborate.

Over the course of the next four days, we will be covering topics on the latest advances in macrofinancial modeling, model evaluation, and estimation. We'll hear about research challenges from regulators, policymakers, and leaders from the private sector. We will also be seeing and hearing from many outstanding graduate students and early-career researchers—the future of macrofinancial modeling. Together we'll explore the frontiers of this essential work, and many stimulating discussions and new ideas are sure to arise.

We’d like to take this opportunity to thank the Alfred P. Sloan Foundation, the CME Group Foundation, and Fidelity Management and Research for supporting this program.

We are pleased you are here and look forward to productive days ahead with interesting classes and excursions in historic Bretton Woods. Young researchers, we encourage you to ask questions at every opportunity and get to know each other. We are delighted you are part of this growing community of researchers.

Best wishes,
Lars Peter Hansen and Andrew W. Lo
MFM Directors
### SUNDAY, JUNE 18, 2017

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>4–11 p.m.</td>
<td>Check-in to Omni Mount Washington for attendees and speakers</td>
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<td></td>
<td><em>Shuttle buses available from Logan Airport</em></td>
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<tr>
<td>6–8 p.m.</td>
<td><strong>Reception and Informal Dinner</strong></td>
<td><strong>Presidential Foyer</strong></td>
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<td>Omni Mount Washington</td>
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### MONDAY, JUNE 19, 2017

*Sessions are in the Presidential Ballroom*

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<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>8–9 a.m.</td>
<td><strong>Breakfast and Registration</strong></td>
<td><strong>Presidential Foyer</strong></td>
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<tr>
<td>9–9:10 a.m.</td>
<td><strong>Welcome</strong></td>
<td><strong>Presidential Foyer</strong></td>
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<tr>
<td>9:10–10:10 a.m.</td>
<td><strong>Liquidity and Segmented Markets</strong></td>
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<td></td>
<td>Andrea Eisfeldt, UCLA Anderson School of Business</td>
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<tr>
<td>10:10–10:20 a.m.</td>
<td><strong>Break</strong></td>
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<tr>
<td>10:20–11:20 a.m.</td>
<td><strong>Financial Networks and Intermediation: Network and Search Models</strong></td>
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<td>Maryam Farboodi, Princeton University</td>
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<tr>
<td>11:20–11:30 a.m.</td>
<td><strong>Break</strong></td>
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<tr>
<td>11:30 a.m.–12:30 p.m.</td>
<td><strong>Orientation and Lunch</strong></td>
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<td></td>
<td>Lars Peter Hansen, University of Chicago</td>
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<td></td>
<td>Andrew W. Lo, Massachusetts Institute of Technology</td>
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<tr>
<td>12:30–12:45 p.m.</td>
<td><strong>Break</strong></td>
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### Monday, June 19, continued

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:45–1:45 p.m.</td>
<td>Financial Crises and Asset Prices</td>
<td>Tyler Muir, UCLA Anderson School of Business</td>
</tr>
<tr>
<td>1:45–2 p.m.</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>2–3 p.m.</td>
<td>Macroeconomic Models with Financial Intermediation</td>
<td>Luigi Bocola, Northwestern University and the Federal Reserve Bank of Minneapolis</td>
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<tr>
<td>3–3:15 p.m.</td>
<td>Break</td>
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<tr>
<td>3:15–4:45 p.m.</td>
<td>Comparative Valuation Dynamics in Models with Financing Restrictions</td>
<td>Lars Peter Hansen, University of Chicago</td>
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<td>Paymon Khorrami, University of Chicago</td>
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<tr>
<td>4:45–6:30 p.m.</td>
<td>Break</td>
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<tr>
<td>6 p.m.</td>
<td>Shuttle to dinner</td>
<td>Pick up at front of hotel</td>
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<tr>
<td>6:30–8:30 p.m.</td>
<td>Dinner</td>
<td>Schilling Brewery in Littleton, New Hampshire</td>
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<tr>
<td>Time</td>
<td>Event</td>
<td>Speaker(s)</td>
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<tr>
<td>8:30–9:30 a.m.</td>
<td>Breakfast and Poster Sessions</td>
<td>Presidential Foyer</td>
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<td></td>
<td>See page 7 for a list of titles</td>
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<tr>
<td>9:30–10:30 a.m.</td>
<td>Big Data, Model Complexity, and Interpretability, Machine Learning, and Finance</td>
<td>Sanmay Das, Washington University in St. Louis</td>
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<tr>
<td>10:30–10:45 a.m.</td>
<td>Break</td>
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<tr>
<td>10:45–11:45 a.m.</td>
<td>The International Monetary System: History and Theory</td>
<td>Matteo Maggiori, Harvard University</td>
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<tr>
<td>11:45 a.m.–12 p.m.</td>
<td>Break</td>
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<tr>
<td>12–1 p.m.</td>
<td>Keynote Lunch</td>
<td>Leo Melamed, CME Group</td>
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<tr>
<td>1–1:15 p.m.</td>
<td>Break</td>
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<tr>
<td>1:15–2:15 p.m.</td>
<td>Dynamics of Housing Debt in the Recent Boom and Bust</td>
<td>Antoinette Schoar, Massachusetts Institute of Technology</td>
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<tr>
<td>2:15–2:30 p.m.</td>
<td>Break</td>
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<tr>
<td>2:30–3:30 p.m.</td>
<td>DSGE Model Estimation—Progress and Challenges</td>
<td>Frank Schorfheide, University of Pennsylvania</td>
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<tr>
<td>3:30–3:45 p.m.</td>
<td>Break</td>
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<tr>
<td>3:45–4:45 p.m.</td>
<td>Measuring the Dark Matter in Asset Pricing Models</td>
<td>Hui Chen, Massachusetts Institute of Technology</td>
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<tr>
<td>4:45–5 p.m.</td>
<td>Break</td>
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**Tuesday, June 20, continued**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>5–5:15 p.m.</td>
<td>Photo Session</td>
<td>Location TBA</td>
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<tr>
<td>5:30–6:15 p.m.</td>
<td>Tour and History of Bretton Woods (Optional)</td>
<td>Meeting location TBA</td>
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<tr>
<td>7–9 p.m.</td>
<td>Dinner</td>
<td>Omni Mount Washington</td>
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</tbody>
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**WEDNESDAY, JUNE 21, 2017**  
Sessions are in the Presidential Ballroom

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>8–9 a.m.</td>
<td>Breakfast</td>
<td>Presidential Foyer</td>
</tr>
<tr>
<td>9–10:30 a.m.</td>
<td>Research Challenges Faced by the Private Sector</td>
<td>Presidential Ballroom</td>
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<tr>
<td></td>
<td>Lisa Emsbo-Mattingly, Fidelity</td>
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<td>Blu Putnam, CME Group</td>
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<td>Alex Levkov, Deutsche Bank</td>
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<td></td>
<td>Andrew W. Lo, Moderator</td>
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</tr>
<tr>
<td>10:30–10:45 a.m.</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>10:45 a.m.–12:20 p.m.</td>
<td>Student Presentations (8–10 minutes each)</td>
<td>See page 6 for a list of titles</td>
</tr>
<tr>
<td>12:20–12:45 p.m.</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>12:45–3:30 p.m.</td>
<td>Backpacking Lunch and Hike</td>
<td>Meeting location TBA</td>
</tr>
<tr>
<td>3:30–6 p.m.</td>
<td>Break</td>
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<tr>
<td>6 p.m.</td>
<td>Shuttle to dinner</td>
<td>Pick up at front of hotel</td>
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<tr>
<td>6–8 p.m.</td>
<td>Dinner</td>
<td>Highland Center at Crawford’s Notch</td>
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</table>
THURSDAY, JUNE 22, 2017

8:30–9:30 a.m.  Breakfast and Poster Sessions
                See page 7 for a list of titles
                Presidential Foyer

9:30–11 a.m.    Research Challenges Faced by Regulators
                Rohan Churm, Bank of England
                Laura Kodres, International Monetary Fund
                Akhtar Siddique, Office of the Comptroller of the Currency
                Lars Peter Hansen, Moderator

11–11:15 a.m.   Photo Session (Rain date)

11:15–11:30 a.m. Break

11:30 a.m.–1 p.m. Lunch and Closing Remarks
                  With Lars Peter Hansen and Andrew W. Lo

2 p.m.           Bus departs for Logan Airport

Omni Mount Washington
White Mountain National Forest
310 Mount Washington Hotel Road
Bretton Woods, NH 03575
603.278.1000
brettonwoods.com

Check-in time: 4 p.m., Sunday, June 18
Check-out time: 11 a.m., Thursday, June 22
Presentations

**Philip Barrett**, International Monetary Fund

**Bong-Geun Choi**, University of Chicago
“Does Financial Innovation Increase Inequality? A Competitive Search Approach”

**Victor Duarte**, MIT
“Macro, Finance, and Macro-Finance: Solving Nonlinear Models in Continuous Time with Approximate Dynamic Programming”

**Cristian Fuenzalida**, New York University
“Macro-Finance Aggregates in a DSGE Framework: A Marginalized Particle Filter Estimation”

**Nina Karnaukh**, University of Pennsylvania Wharton School
“The Dollar Ahead of FOMC Target Rate Changes”

**Alexander Rodnyansky**, Princeton University
“(Un)Competitive Devaluations and Firm Dynamics: Evidence from Abenomics”

**Ishita Sen**, London Business School
“Capital Regulation and Product Market Outcomes”

**Maximilian Ulrich Werner**, University of Zurich
“Occasionally Binding Liquidity Constraints and Macroeconomic Dynamics”

**Yingnan Zhao**, University of Zurich
“Bank Lending and Firm Dynamics in General Equilibrium”
Poster Sessions

Tuesday, June 20, 2017

Carlos Avenancio, UC Berkeley
“Why Corporate Debt Preserves Labor Market Disparities?: The Connection Between Capital Structure, Unemployment, and Wages”

German Gutierrez, NYU Stern
“(Under-)Investment in Advanced Economies”

Jiayin Hu, Columbia University
“Regulating the Shadow Banking System”

Margaret Jacobson, Indiana University–Bloomington
“Shadow Banking and the U.S. Housing Boom”

Adam Jørring, University of Chicago
“The Real Cost of Financial Inattention across Multiple Domains: Evidence from U.S. Bank Customers”

Divya Kirti, IMF
“How is the Likelihood of Fire Sales in a Crisis Affected by the Interaction of Various Bank Regulations?”

Yann Koby, Princeton University
“The Reversal Rate: An Effective Lower Bound on Monetary Policy”

Qi Li, The University of Chicago
“Securitization and Liquidity: When Asset Owners Possess Private Information”

Pierre Mabille, NYU Stern
“Household Credit Uncertainty and the Real Interest Rate”

Thursday, June 22, 2017

Juan Morelli, NYU Stern
“Inequality in Wealth and Incentives to Default”

Jan Möller, Bank of England
“Constrained by Default: Precautionary Savings and Bankruptcy Risk”

Michael Reher, Harvard University
“Non-Banks and Lending Standards in Mortgage Markets: The Spillovers from Liquidity Regulation”

Julian Richers, Boston University
“Optimal Bank Recapitalization with Sovereign Default Risk”

Andres Schneider, UCLA
“Risk Sharing and the Term Structure of Interest Rates”

Willem van Vliet, University of Chicago
“Estimating Bank Interconnectedness from Market Data”

Shihan Xie, UCSD
“Aggregate Monetary Policy Shock and Heterogeneous Local Housing Price Responses”

Dayin Zhang, UC Berkeley, Haas
“Federal Home Loan Bank Advances and the Lending Behavior of Financial Institutions during the Financial Crisis”

Chao Zi, University of Illinois at Urbana-Champaign
“Real Flight to Safety”
Speakers

**Lars Peter Hansen**, MFM Director, is the David Rockefeller Distinguished Service Professor in Economics and Statistics at the University of Chicago. He is also cochair and director of the Becker Friedman Institute. In 2013, he was a recipient of the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel. Hansen is known for making fundamental advances in our understanding of how agents cope with changing and risky environments. He has contributed to the development of statistical methods designed to explore the interconnections between macroeconomic indicators and assets in financial markets.

**Luigi Bocola**'s research interests are macroeconomics, time series econometrics, and financial economics. He is currently studying the effects of sovereign default risk on financial intermediation, and he is developing tools for the empirical analysis of nonlinear macroeconomic models.

**Andrew W. Lo**, MFM Director, is the Charles E. and Susan T. Harris Professor, a professor of finance, and the director of the Laboratory for Financial Engineering at the Massachusetts Institute of Technology Sloan School of Management. His awards include the Alfred P. Sloan Foundation Fellowship, the Paul A. Samuelson Award, the American Association for Individual Investors Award, and many others. A former governor of the Boston Stock Exchange, he is currently a research associate of the National Bureau of Economic Research, a member of the NASD’s Economic Advisory Board, and founder and chief scientific officer of AlphaSimplex Group, LLC, a quantitative investment management company based in Cambridge, Massachusetts.

**Sanmay Das** is currently an associate professor in the Department of Computer Science and Engineering at Washington University in St. Louis. He is the recipient of a National Science Foundation CAREER Award and is currently vice-chair of the ACM Special Interest Group on Artificial Intelligence. He has served as program cochair of Auctions, Market Mechanisms, and their Applications (AMMA) and as workshop chair of ACM Conference on Economics and Computation. His research lies in designing effective algorithms for agents in complex, uncertain environments and in understanding the social or collective outcomes of individual behavior.

**Hui Chen** is an Associate Professor of Finance at the MIT Sloan School of Management. His research focuses on asset pricing and its connections with corporate finance. Chen is particularly interested in the interactions between the macro economy
and term structure, credit risk, and corporate financing or investment decisions. His recent research projects include application of business cycle models to explain corporate financing behavior and corporate bond pricing, as well as analysis of the effects of incomplete markets on entrepreneurial financing and investments. Chen holds a BA in economics and finance from Zhongshan University, an MS in mathematics from the University of Michigan, and a PhD in finance from the University of Chicago.

Rohan Churm is the Head of Stress Testing Strategy Division at the Bank of England. The division was created in 2014 and is responsible for the delivery of stress tests and development of the stress testing framework. The October 2015 paper “The Bank of England’s approach to stress testing the UK banking system” set out the main features of the Bank’s stress-testing framework to 2018. Rohan joined the Bank of England in 2001 as an economist. He has written various articles on monetary policy and financial market issues, including the Funding for Lending Scheme and the impact of Quantitative Easing. He obtained a BA in Economics from Cambridge University and an MSc in Economics and Finance from Warwick Business School.

Andrea L. Eisfeldt is the Laurence D. and Lori W. Fink Endowed Chair in Finance and a Professor of Finance at UCLA Anderson. Prior to her position at UCLA, she was a tenured associate professor at the Kellogg School of Management. She received her PhD in Economics from the University of Chicago in 2000. Professor Eisfeldt’s research focuses on macroeconomics and finance, in particular on the dynamics of market liquidity and the effects of financial frictions on corporate value and asset prices. Her papers have earned the Smith Breeden Distinguished Paper prize in 2004, the Jensen Prize (second place) in 2008, and the Smith Breeden First Place Paper award in 2013. She has also been awarded research grants by the National Science Foundation and the Banque de France.

Lisa Emsbo-Mattingly is a director of research in the Global Asset Allocation (GAA) group at Fidelity Investments. Fidelity Investments is a leading provider of investment management, retirement planning, portfolio guidance, brokerage, benefits outsourcing and other financial products and services to more than 20 million individuals, institutions and financial intermediaries. In this role, Lisa is responsible for leading the Asset Allocation Research Team in conducting economic, fundamental, and quantitative research to develop asset allocation and macro investment recommendations for Fidelity’s portfolio managers and investment teams.

Lisa earned her bachelor of arts degree in economics and government from Oberlin College and her masters degree in economics from Boston University. She is the former President of the National Association for Business Economics and is the former president of the Boston Economic Club.
Maryam Farboodi is an Assistant Professor of Economics at Princeton University. Her research interests include financial economics, corporate finance, and mechanism design. Her work focuses on different aspects of intermediation and why intermediaries arise in different settings. This includes models of interbank network formation, determinants of counterparty risk and bank portfolio opacity, search models of intermediation, and information acquisition by intermediaries. She is the recipient of awards including Review of Economic Studies Tour, Top Finance Graduate Award, Best Finance Theory Paper Award, John Leusner Fellowship and the Stevanovich Fellowship. Farboodi earned her doctorate in Financial Economics from the University of Chicago.

Paymon Khorrami is a fifth-year graduate student in financial economics at the University of Chicago. His research interests lie in understanding the role of financial frictions in asset pricing and macroeconomics. He is currently studying effects of long-term growth in income inequality and financial intermediation on macroeconomic stability. In a previous paper, he studies how endogenous participation attenuates the implications of limited asset market participation for risk premia and price dynamics. Before entering graduate school, he worked at the Federal Reserve Bank of Chicago, assisting with research on financial markets microstructure and household finance as well as with policy work. Besides research, he enjoys playing and watching basketball and reading about sports analytics. Khorrami is a 2016 MFM Fellowship awardee.

Laura Kodres is division chief for the Global Financial Stability Division in the Monetary and Capital Markets Department of the International Monetary Fund. She oversees the analytical chapters of the Global Financial Stability Report and works on a range of financial sector policy issues. Since joining the Fund in 1994 from the US Federal Reserve Board, she has worked on multilateral economic issues and several countries in Europe, both advanced and low income. Her research focuses on contagion, macrofinancial linkages, and methods to measure and mitigate systemic risks.

Alexey Levkov is a Director and Head of Treasury Modeling and Analytics at Deutsche Bank. Alexey is responsible for the development and execution of forward-looking models of revenues, income, and balances for the U.S. entity of Deutsche Bank. The models are utilized in Deutsche Bank’s financial planning as well as supervisory stress tests in the U.S. Prior to joining Deutsche Bank, Alexey worked at The Clearing House and the Federal Reserve Bank of Boston. He earned his PhD in Economics from Brown University with his dissertation focusing on the interplay between financial and labor markets.
**Matteo Maggiori** is an Assistant Professor of Economics at Harvard University. His research focuses on finance and international macroeconomics. His research topics have included the analysis of exchange rate dynamics, global capital flows, the international financial system, bubbles, and very long-run discount rates. He is a faculty research fellow at the National Bureau of Economic Research and a research affiliate at the Center for Economic Policy Research. His research has been funded by the National Science Foundation (CAREER grant), selected for the 2012 Review of Economic Studies May Meetings (European Tour), and won the 2013 AQR Insight Award and 2017 AQR Young Researcher Award. He received his PhD from the University of California at Berkeley.

**Leo Melamed** is the founder of financial futures. He led in the creation of our FX, interest rate, and stock index futures contracts. He served as CME Chairman of the board from 1968 until 1973 and upon founding of the International Monetary Market (IMM) as its Chairman from 1972 until its merger with the CME in 1976 and then as Chairman of the merged exchange until 1977. He has served as CME Chairman Emeritus since 1997 and Chairman of our Strategic Steering Committee since 2001. Mr. Melamed led the CME in the role of Special Counsel to our board from 1977 to 1985 and then in the role of Chairman of its Executive Committee from 1985 until 1991. He was instrumental in the creation and launch of the Globex transaction system and served as its founding chairman in 1992. From 1993 to 2001, he served as Chairman and CEO of Sakura Dellsher, Inc., a former clearing firm of CME, and currently serves as Chairman and CEO of Melamed & Associates, a global consulting group. He is founder and a permanent special advisor to the National Futures Association, and an Advisor of the International Advisory Council of the CSRC in China. He serves on the board of overseers of the Becker Friedman Institute of the University of Chicago. Mr. Melamed serves as a director of The Chicago Council on Global Affairs and as Sr. Advisor to LEAP Innovations. Mr. Melamed is a published author of a number of books pertaining to markets and the history of CME Group.

**Tyler Muir**’s main research interests are at the intersection of asset pricing, financial intermediaries and financial crises. His recent work has focused on how the health of the financial sector affects variation in asset prices. Muir finds that an intermediary-based asset pricing model can help explain returns across assets. He has also examined the behavior of asset prices during financial crises using historical data over 150 years and 14 countries, and documented substantial declines in stock and bond prices, even relative to the declines in macroeconomic fundamentals.

Muir received his Ph.D. in finance from the Kellogg School of Management and his B.A. in mathematics from UC Berkeley. He was awarded the 2015 Amundi Smith Breeden Distinguished Paper Prize for research published in the Journal of Finance. He joined UCLA Anderson from the faculty of Yale School of Management.
**Bluford (Blu) Putnam** is the managing director and chief economist of CME Group. He has authored several books on international finance, as well as many articles that have been published in academic journals and business publications. Putnam has more than 35 years of experience in the financial services industry with concentrations in central banking, investment research, and portfolio management. He most recently served as Managing Partner for Bayesian Edge Technology & Solutions, Ltd., a financial risk management and portfolio advisory service he founded in 2000.

**Antoinette Schoar** is the Michael Koerner ’49 Professor of Entrepreneurial Finance at MIT. She is the coorganizer of the Entrepreneurship Working Group at the National Bureau of Economics, associate editor of the *Journal of Finance* and the *Journal of Economic Perspectives*, and a cofounder of ideas42, a nonprofit that uses insight from behavioral economics and psychology to solve social problems. Since 2006, she has been the academic advisor for the Small and Medium Enterprise Center IFMR India. She researches venture capital, entrepreneurial finance, corporate diversification, governance, and capital budgeting decisions in firms.

**Frank Schorfheide** is a professor of economics, associate chair and undergraduate chair of the Department of Economics at the University of Pennsylvania. He is also a research fellow at the Centre for Economic Policy Research and a research associate at the National Bureau of Economic Research. He has been a visiting scholar at several central banks. He currently advises several regional Federal Reserve Banks in regard to the use of dynamic stochastic general equilibrium (DSGE) models and vector autoregressions for forecasting and policy analysis. He is the coauthor of the book *Bayesian Estimation of DSGE Models*.

**Akhtar Siddique** is the deputy director for the Enterprise Risk Analysis Division with the Economics Department at the Office of the Comptroller of the Currency. He directly participates in examinations and intra- and interagency supervisory and policy initiatives, particularly related to counterparty credit risk, economic capital, valuation issues, allowance for loan and lease losses, stress testing, and Pillar 2 risk management processes.
Attendees

Carlos F. Avenancio-Leon is a doctoral student at the University of California, Berkeley. Before moving to Berkeley, he completed law school and undergraduate studies at the University of Puerto Rico. His research agenda explores the role of finance in affecting the trade-off between stability and distribution. In particular, he is interested in building models to explore the role of corporate debt in reallocating and distributing unemployment risk. His other projects include evaluating the role of different forms of unemployment risk on the distribution of credit (with Abhay Aneja and Sanket Korgaonkar) and on the entry and exit of firms. Carlos is a 2017 MFM Fellowship awardee.

Cynthia Mei Balloch is a PhD candidate in the Economics Department at Columbia University. Her research interests include international macroeconomics, financial intermediation, and firms. Her current projects focus on bank heterogeneity in lending markets and how this affects credit volume, credit quality, aggregate output, and productivity. Her paper, “Default, Commitment, and Domestic Bank Holdings of Sovereign Debt,” won the Harriss Prize for the best second year paper in the Columbia Economics Department. Cynthia received a BS in engineering sciences from Harvard University and a Master in Public Administration/International Development from the Harvard Kennedy School. Cynthia is a 2015 MFM Fellowship awardee.

Philip Barrett is an economist at the International Monetary Fund. He holds a PhD from the University of Chicago, as well as a bachelor’s from the University of Oxford and a master’s from the LSE. Philip’s research interests are in international macroeconomics. Most recently he has been working on the relationship between exchange rate movements and international asset holdings (with Jonathan Adams). Other projects include work on sovereign default and optimal fiscal unions. Philip is a 2014 MFM Fellowship awardee.

Gorkem Bostanci is a third year PhD student at University of Pennsylvania’s Economics Department. He is mainly interested in household finance and macroprudential regulation. He has coauthored a paper on network structure of sovereign credit risk which combines elements from network theory, time series and machine learning. Gorkem is currently working on a project that aims to rationalize existence of repo agreements with liquid collateral, using search theory.
Zied Ben Chaouch is currently a PhD student in the Electrical Engineering and Computer Science (EECS) department at MIT. He studied Mathematics and Physics as an undergraduate at McGill. After joining MIT, he completed his Masters thesis on influence maximization in models of opinion dynamics with Professor John Tsitsiklis in LIDS, and is also currently working with Professor Andrew Lo on financial market models and systemic risk. His research interests are in the field of probability and stochastic processes, as well as their applications to finance and social networks. Furthermore, Zied has been a teaching assistant for a few probability courses taught at MIT (6.041, 6.436, and the online 6.041x class), and has offered a “math camp” for incoming students to the IDSS/SES doctoral program. He has just received the Frederick C. Hennie II Teaching Award for outstanding teaching.

BongGeun Choi is a PhD candidate in economics at the University of Chicago. His research agenda centers on linkages between financial markets and the macroeconomy. In his current work, he conducts a macroeconomic welfare assessment of shadow banking, considering dynamic effects of liquidity creation and systemic risk. In another project, he explores macroeconomic consequences of how information frictions and imperfect competition interact in the financial sector. BongGeun completed his bachelor’s and master’s studies at Seoul National University in Korea and at the University of Minnesota respectively. At Chicago, he has been awarded the Lee Prize in Economics for the best performance in Macroeconomics Core. BongGeun is a 2016 MFM Fellowship awardee.

Christopher Clayton is a third-year economics PhD student at Harvard University. As an undergrad, he studied math and economics at the University of Chicago and conducted research in auction theory. His primary research interests are in macrofinance with secondary interest in behavioral mechanism design. The macro research he currently works on includes effects of predatory lending on financial amplification, incorporating bank heterogeneous into financial frictions models, and the effects of reputation in sovereign debt markets.

Josue Cox is a second-year PhD student in the Department of Economics at New York University (NYU). During this time, he has concentrated on financial economics and monetary theory courses. Since summer 2016, he has been working as a RA for Professor Van Nieuwerburgh at the Center for Real Estate Finance Research in a project studying institutional investor demand. He is very interested in studying the relationship between asset markets, the banking sector, and monetary and macroprudential policies. Prior to joining NYU, Josue earned a master’s degree at PUC-Rio (Brazil) with a concentration in macroeconomics. He received his bachelor degree in economics from Universidad de Lima (Peru).
**Victor Duarte** is a PhD candidate in financial economics at MIT’s Sloan School of Management. His research interests include financial intermediation, macrofinance, the intersection of asset pricing and corporate finance, and numerical methods in economics and finance. Prior to joining the PhD program at Sloan, Victor received a BSc. in aeronautical engineering from Instituto Tecnológico de Aeronáutica and an MSc in economics from Fundação Getúlio Vargas.

**Cristian Fuenzalida** is a PhD candidate at New York University. His research interests include empirical macroeconomics, econometrics and machine learning, financial volatility, and asset pricing. In his most recent research, Cristian seeks to disentangle identification issues in a general equilibrium setting, with a focus on developing new algorithms for models used by central banks. His paper proposes a new framework for estimation of medium-scale DSGE models featuring a financial sector. Another part of his research agenda focuses on developing volatility models for low-frequency volatility in the financial markets, showing that existing frameworks can be generalized using semi-supervised manifold learning theory. Prior to entering his PhD program, he worked as a macroeconomic adviser at the Ministry of Finance in Chile. Cristian is a 2017 MFM Fellowship awardee.

**Tim Gensey** is the CMHCs market analyst for Northern Alberta, the North West Territories, and Nunavut. In this role, he performs analysis that supports the internal operation of the CMHC as well as produces reports to help decision makers and inform stakeholders. Tim has completed an MA in economics at the University of Toronto, which focused on empirical macroeconomics, as well as a BS in economics with a commerce minor at the University of Victoria. Tim has previously worked with the Bank of Canada as a research assistant in the Canadian Economic Analysis division.

**Daniel Green** is a PhD candidate in financial economics at the MIT Sloan School of Management. His research broadly seeks to understand how financing frictions change the nature of economic activity. His projects have begun to explore this in several dimensions. For example, he explores how the specific financing terms offered by intermediaries and investors affect the types of real investments that are undertaken. In another project, Daniel seeks to understand how the information used by intermediaries in screening investment opportunities affects the propagation of shocks through the economy. Prior to starting at MIT, he worked as a research assistant in the Research Group at the Federal Reserve Bank of New York. Before that, Daniel graduated summa cum laude from the University of Rochester with majors in economics and mathematics. Daniel is a 2017 MFM Fellowship awardee.
Germán Gutiérrez is a PhD student in finance at NYU Stern. His research interests lie at the intersection of macroeconomics, banking, and corporate finance. Recently, his work has focused on firm investment decisions and how they relate to industry competition and ownership. He has also studied topics in systemic risk and macro-prudential regulation as well as rare event simulation. Before joining NYU Stern, Germán was a Principal at Oliver Wyman Financial Services, a consultancy, where he advised large financial institutions on a variety of finance and risk management topics, including stress testing, financial and risk modeling, and model risk management. He holds a bachelor’s and a MEng in operations research from Cornell University.

Violeta A. Gutkowksi is a PhD candidate in economics at Brown University. Her research focuses on finance, macroeconomics, and inequality. She completed her undergraduate studies and master’s degree in economics at Universidad Torcuato Di Tella, in Argentina. Before starting her PhD, Violeta has worked at the World Bank in the Finance and Private Sector Development Research Group.

Jiayin Hu is a third-year PhD student in the Department of Economics at Columbia University. Her research interests include banking and financial regulation. She currently works on modeling the impacts of the Financial Stability Oversight Council (FSOC) on the shadow banking sector and its systemic risk implications. Previously she was working on the optimal design of deposit insurance. Both projects are under the supervision of Professor Patrick Bolton. Prior to Columbia, Jiayin obtained her BA from the School of Economics and Management at Tsinghua University. She was a two-time winner of the National Scholarship, awarded by the Ministry of Education of China for academic excellence. Jiayin worked as an intern at the Research Bureau of People’s Bank of China in 2014 and as a consultant to the Department of Economic and Social Affairs at the United Nations in 2016.

Joe Huang graduated from the University of Chicago with a BA in economics in 2015. He works for BlackRock as a research analyst in a quantitative investment team. His work experience includes using quantitative methods to analyze financial markets with a focus on emerging economies. He will join the MFM project as a research associate beginning July 2017.

Xitong Hui is a MSc econometrics and mathematical econometrics student at London School of Economics. She is interested in microeconomic theory, econometrics theory, and macrofinance modeling tools. Xitong is planning on beginning a MRes in economics at London School of Economics in 2017.
Margaret M. Jacobson is a third year graduate student at Indiana University where she is a National Science Foundation Fellow. Her research interests include macroeconomics, banking, and monetary and fiscal policy. Her current work integrates off-balance sheet banking activity into a macroeconomic framework to account for the housing boom of the 2000s. Prior to graduate school, she was a senior research analyst at the Federal Reserve Bank of Cleveland. She earned an MA in economics from Indiana University in 2015 and a BA in economics and French from Oberlin College in 2011.

Adam Jørring is a PhD candidate in the Joint Program of Financial Economics at the University of Chicago Department of Economics and The University of Chicago Booth School of Business. His research agenda is centered on the intersection of macroeconomics and household finance. Using micro-level panel data and a quantitative model, Adam studies how financial inattention affects the cost of credit booms. Jørring holds a BS in economics from the University of Copenhagen. Before starting his PhD, Adam worked for Goldman Sachs and the Danish Central Bank. Adam is a 2017 MFM Fellowship awardee.

Nina Karnaukh received her Ph.D. in Finance at the University of St. Gallen. Since 2015, she is a visiting scholar at the Wharton School of the University of Pennsylvania. Later this year, Nina will join the finance faculty at Ohio State University. Her research interests include asset pricing, international finance, monetary policy.

Nina’s job market paper *The Dollar Ahead of FOMC Target Rate Changes* finds predictability in the U.S. dollar ahead of the Federal Reserve’s meetings. A high federal funds futures spread three days in advance of an FOMC meeting predicts a rise in the dollar over the subsequent two-day period. The results imply that fixed income is faster in incorporating information than FX.

In her research, she tries to understand (1) how different asset markets incorporate information and (2) what are common risk sources across different markets. See more at www.ninakarnaukh.com.

Divya Kirti is an Economist at the International Monetary Fund. He earned his PhD in economics at Harvard University in 2016. He completed his undergraduate studies at Cornell University. Divya’s research interests are in financial intermediation and corporate finance. His recent work looks at the implications of risk management by financial institutions for financial intermediation and corporate finance. Other projects include work on understanding the combined impact of capital and liquidity requirements (with Vijay Narasiman). Divya is a 2014 MFM Fellowship awardee.
Yann Koby is a PhD student in economics at Princeton University. He has been brought to economics by the recent financial crisis, whose cause and consequences are still subject to uncertainty and debate. In particular, his recent research focuses on the role of the banking sector during the recovery, or, particularly for Europe, the lack thereof. This agenda focuses on supply-side explanations for the lack of credit flows, arguing that a low-interest rate environment – which hurts banks’ margins – can be a cause for low credit flows, particularly to small and medium-sized enterprises. Yann is a 2017 MFM Fellowship awardee.

Jian Li is a second-year PhD student in the Joint Program of Financial Economics in the Economics Department and Booth School of Business, University of Chicago. Her passion for economic research is driven by the desire to understand and quantify the underlying mechanisms that affect the development of human society. Her research interest is broadly macro-finance with specific interest in the role that different financial intermediaries play in economic growth and business cycle fluctuations. Before coming to the University of Chicago, Jian studied economics and mathematics at University of Hong Kong and also briefly at Columbia University and Tsinghua University as an exchange student.

Qi Li is a fourth year PhD student in the Department of Economics at The University of Chicago. She received the Martin C. and Margaret M. Lee Prize in 2014 for Best Performance in Macro Core Sequence. Her research focuses on how uncertainty and information asymmetry affect individual decisions or aggregate outcomes, with applications to financial markets and aggregate economy, product market and labor market choices, as well as households’ fertility decisions.

Pierre Mabille is a PhD student in the Economics Department at NYU Stern. He holds a BS in econometrics and an MA in economics from École Normale Supérieure, Paris. His research interests lie at the intersection of macroeconomics and finance, with a focus on heterogeneous agents models with aggregate risk and their numerical solution methods. His current research studies how households’ expectations about future credit prospects affect macroeconomic and financial variables in the aftermath of a credit crunch. He is also working with Stijn Van Nieuwerburgh on a large-scale macroeconomic model with financially constrained producers and intermediaries, designed to evaluate the quantitative effect of macroprudential policy.
Maarten Meeuwis is a third-year PhD student in financial economics at MIT Sloan School of Management. He is interested in theoretical and empirical asset pricing and macro finance. His current work focuses on the relationship between business cycles and asset prices in the presence of idiosyncratic risks at the household level. In other work, he studies the impact of displacement risk on household portfolio choice in a life-cycle model. Prior to MIT Sloan, Maarten received undergraduate and master’s degrees in econometrics and operations research from Tilburg University and a master’s degree in finance from the University of Cambridge Judge Business School.

Timothy Mok is a second-year PhD student in economics at Stanford University. His research interests are macroeconomics and finance. Timothy graduated from the Stern School of Business at New York University in 2013 with a BSc in finance and mathematics and a minor in philosophy.

Juan Morelli is a third-year PhD student at NYU Stern and completed his masters at Torcuato di Tella (Argentina). His main interests are finance and economics, international economics, and information economics.

Jordan Pandolfo was raised in St. Louis, Missouri and attended the University of Missouri-Columbia for undergraduate and master’s programs. Currently, he is a second-year economics PhD student at the University of Minnesota in Minneapolis.

Jan Möller is an Economist at the Bank of England and received his PhD from New York University in 2016. His research interests include macroeconomics, financial economics, and firm dynamics. He is investigating the interconnection of financial constraints and cross-sectional dynamics of employment and investment. Additionally, he studies adverse feedback loops between aggregate demand and corporate defaults operating through unemployment risk and precautionary savings. He is a 2015 MFM Fellowship awardee.

Choonsung Park is a research fellow at the Macroeconomic Research Division in the Korea Institute of Finance. He received a PhD degree in economics from the University of Rochester. His current research interests include macro/labor policy, the effect of credit on macroeconomics, financial regulation and macroprudential policy.

Sungwook Park is a research fellow at the Macroeconomic Research Division in the Korea Institute of Finance. He received a PhD degree in economics from The Ohio State University. Prior to joining the Institute, he worked at the Bank of Korea from 1994 to 2009. He also recently served as senior advisor to the Chairman of the Financial Services Commission. His current research interests include monetary policy and international capital flows.
Anton Petukhov is a fourth-year PhD student in financial economics at MIT Sloan School of Management. Prior to joining MIT, he received his MSc degree from Moscow Institute of Physics and Technology and MA from New Economics School. His current research interests lie at the intersection of finance and macroeconomics. His recent projects focused on the effects of circuit breakers on trading activity and price determination, effects of macroeconomic information releases on financial markets, and the relationship between the labor market and the cross section of firms and stock prices. Anton is a 2017 MFM Fellowship awardee.

Michael Reher is a PhD candidate in economics at Harvard University. His research focuses on the intersection of household finance and macroeconomics, with an emphasis on macroprudential regulation. He previously worked in the Supervision and Regulation Department at the Federal Reserve Bank of San Francisco and at Wealthfront, an automated investment adviser. He holds a BS in international economics from Georgetown University.

Julian Richers is a PhD candidate in the Economics Department at Boston University. His research interests include international finance, macro, and monetary economics. His current work explores how sovereign default risk influences the optimal structure of bank recapitalization. Other projects include studying the impact of hedge fund contracting on leverage and asset prices in segmented financial markets. Julian holds a BA in economics from Columbia University and previously worked as an economist in Global Macro Research at Goldman Sachs. He also gained experience at the German Federal Ministry of Finance and at Kensho, a financial technology firm. Julian is a 2017 MFM Fellowship awardee.

Gianluca Rinaldi is an Italian PhD student at Harvard University and is interested in asset pricing, macroeconomics, and econometrics.

Alexander Rodnyansky is a PhD candidate at the Department of Economics and the Bendheim Center for Finance at Princeton University. His main fields of interest are finance and international finance. In his core work, Alexander uses microdata together with a variety of empirical and theoretical methodologies to carefully investigate the mechanisms through which (unconventional) monetary policy—mainly quantitative easing and/or exchange rate manipulation—affect the macroeconomy. Prior to joining Princeton’s PhD program, Alexander received his BS and MS degrees from the London School of Economics (LSE). Alexander is a 2014 MFM Fellowship awardee.
**Daniel Schaffa** is an economics doctoral student at the University of Michigan and a graduate of the University of Michigan Law School. He uses economic, statistical, mathematical, and legal analysis to examine policy-relevant issues. His research focus is on optimal tax, dynamic household decision-making, and the economics of crime. Some of his work looks at the regulation of interrelated activities, using either corrective taxation or criminal sanctions. He will join the faculty of the University of Richmond School of Law in Fall 2017, where he will teach courses on tax, economics, and business.

**Andres Schneider** is a PhD candidate in economics at UCLA. His research interests are in macrofinance, balance sheet dynamics, and heterogeneous agents. Andres is also interested in numerical methods and empirical asset pricing. He is originally from Argentina, where he studied at the University of Buenos Aires and Torcuato Di Tella University. Andres lived and worked in Washington DC for almost two years prior to joining UCLA.

**Ishita Sen** is a PhD candidate in finance at the London Business School. Her research interests lie in the areas of financial intermediation, asset pricing, and in the financial economics of insurance markets. Her current research focuses on understanding the determinants of hedging behavior of financial institutions and the potential implications of these decisions for systemic risk and product market outcomes. Ishita completed a master’s degree in economics at the Delhi School of Economics, and worked in the finance industry in various roles before obtaining an MSc in Finance from the London Business School. Since 2015, she has been a PhD research intern at the Bank of England’s Prudential Policy Directorate. Ishita is a 2017 MFM fellowship awardee.

**Dejanir Silva** is a third-year PhD student at the Department of Economics at MIT. His research interests span topics in the intersection of macroeconomics, international economics, and finance. He is particularly interested in the design of economic policy, from monetary and fiscal policy to macroprudential and financial regulation. His most recent project studies how the balance sheet position of financial intermediaries can generate contagion in sovereign debt markets and discuss the associated policy response to sovereign default crises. Previously, he has considered how fiscal policy should respond to credit spread shocks for countries in a currency union. Prior to joining MIT, Dejanir completed his undergraduate studies and obtained a master’s degree from the University of São Paulo. He is a January 2014 MFM Fellowship awardee.

**Vytautas Valaitis** grew up and completed his undergraduate studies in Vilnius, Lithuania. He continued his studies at the Central European University in Budapest. While there Vytautas became excited about pursuing an academic path, and since the summer of 2015, he has been an economics PhD student at Duke University in the
Department of Economics. His research interests include modeling the effects of financial constraints on the decisions of heterogeneous households and firms.

Willem van Vliet is a fourth year PhD student in financial economics at the University of Chicago. His current research focuses on developing new measures of systemic risk. He is developing a strategy to estimate the interconnectedness of financial institutions from market data in a way that distinguishes between contagion and correlated fundamentals. Before starting his PhD, van Vliet graduated from the University of Chicago in 2011 with a BS in mathematics and a BA in economics. He also worked as a research assistant for Professor James Heckman’s group at the University of Chicago. Van Vliet is a 2016 MFM fellowship awardee.

Max Werner, a trained mathematician, is currently finalizing his doctoral studies in management and economics under the supervision of Karl Schmedders at the University of Zurich. His research interests include macrofinancial linkages, asset pricing, monetary policy, incomplete markets and numerical methods.

Liukun Wu is a first year Economics PhD student at Princeton University. She received an undergraduate degree in Operations Research and Financial Engineering at Princeton, and then worked briefly in the financial sector on asset-backed securitization. Her research interests lie between macroeconomics and finance, and is interested in topics such as macroprudential policies, bank networks, and institutional investors. His hobbies are traveling, learning about cultures and languages, and reading literature.

Shihan Xie is a PhD candidate in economics at University of California, San Diego, supervised by Professor James Hamilton. Her research focuses on monetary policy and housing markets. She studies how financial frictions and extrapolative expectations in housing markets affect the transmission of monetary policy shocks to housing prices. She identifies and estimates both channels by exploring cross-sectional variation in housing price responses to aggregate monetary policy shocks. Her research was recognized as the department’s “best third year paper.” She is also the winner of the department’s Clive Granger research fellowship and excellence in teaching award. Shihan received her BS in mathematics and economics from Nanyang Technological University in Singapore with first class honors.
Dayin Zhang is currently a third-year PhD student at Berkeley-Haas. His main academic interests are in real estate finance, financial institutions, and macroeconomics. Dayin’s current research tries to test empirically how government agency guarantee to the mortgage loans affects the funding stability and credit provision of the financial institutions. More broadly, he aims to understand how the detailed contractual configuration of the financial sector affects financial intermediation and the amplification process in the context of the business cycle.

Yingnan Zhao is a post-doc research fellow at the University of Zurich. Her research interests lie in macroeconomics and financial economics, with a focus on the interaction between the macroeconomy and the financial market. She investigates how aggregate credit crunch influences firm entry and firm dynamics in a frictional financial market. Yingnan received her PhD in economics from the University of Zurich, Switzerland in September 2016, with the distinction summa cum laude. She holds a master’s degree in economics from the University of Zurich and a bachelor’s degree in mathematics from Fudan University in China.

Geoffery Zheng received his undergraduate degree from the University of Chicago in 2013, where he majored in Math, Economics, and Physics. After working for a year at a New York-based private equity firm, he joined the PhD program at UCLA Anderson School of Management in 2014. His research focuses on the impact of microeconomic frictions on the economy, particularly through compensation and labor channels. His paper “Growth Options, Incentives, and Pay-for-Performance” with Sebastian Gryglewicz and Barney Hartman-Glaser was awarded the Jacob Gold & Associates Best Paper Prize at the 2017 ASU Sonoran Winter Finance Conference.

Chao Zi is a third-year PhD candidate at the Department of Finance, University of Illinois at Urbana-Champaign. His research focuses on financial markets, asset pricing, and interactions between finance and macroeconomics. His paper, “Designated Market Makers Still Matter: Evidence from Two Natural Experiments,” is forthcoming in the Journal of Financial Economics. He has presented at the Paris December Finance Meeting. He holds a MS in financial engineering from University of Illinois at Urbana-Champaign and a BS from Nanjing University.
MFM Fellowship Awardees

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NYU

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Massachusetts Institute of Technology

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Princeton University

Alexandra Indarte
Northwestern University

Adam Jørring*
University of Chicago

Yann Koby*
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Anton Petukhov
MIT Sloan

Julian Richers*
Boston University

Samuel Rosen
University of North Carolina at Chapel Hill

Ishita Sen*
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Quentin Vandeweyer
Sciences Po

Tianyue Ruan
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MIT

Pablo Azar
MIT

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Luigi Bocola*
Northwestern University and Minneapolis Fed

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MIT

Paolo Cavallino
New York University

BongGeun Choi*
University of Chicago

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Princeton University
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Chicago Booth
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University of Chicago

*Presenting at MFM Summer Session 2017
About our initiative

**Macro Financial Modeling** | mfmgroup.org
This collaborative venture works to develop and assess enhanced macroeconomic models that better account for important financial sector influences on the economy. The aim is to close gaps in our ability to define, measure, and manage financial sector activities that pose risks to the macroeconomy as a whole.

The project brings together a network of prominent scholars and innovative early career researchers actively working in this field. Since 2012, the project group has met regularly to discuss and critique current and proposed models. With input and regular involvement of policymakers, the group is working to develop the next generation of policy tools.

**Laboratory for Financial Engineering** | lfe.mit.edu
MIT’s Laboratory for Financial Engineering is a research center created as a partnership between academia and industry, designed to support and promote research in financial engineering and computational finance.

**Becker Friedman Institute for Research in Economics** | bfi.uchicago.edu
A premier destination for scholars around the world, the Becker Friedman Institute for Research in Economics works to inspire, refine, advance, and disseminate new knowledge on important economic and policy questions.

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**About Bretton Woods**
At this historical site, the Bretton Woods International Monetary Conference was held July 1-22, 1944. These meetings established the World Bank to provide long-term international funds, especially to underdeveloped countries, and the International Monetary Fund which works with 189 countries to foster global monetary cooperation, secure financial stability, facilitate international trade, promote high employment and sustainable economic growth, and reduce poverty around the world.
Inspiration from Robert Frost

To pay tribute to this spectacular region of the country that inspired famed poet Robert Frost, we feature two notable poems for you to enjoy. Not far from Bretton Woods, in Franconia, New Hampshire, Frost spent many years writing splendid poetry.

We hope the MFM summer session inspires you to produce exemplary work at the intersection of economics and finance.

The Road Not Taken

Two roads diverged in a yellow wood,
And sorry I could not travel both
And be one traveler, long I stood
And looked down one as far as I could
To where it bent in the undergrowth;

Then took the other, as just as fair,
And having perhaps the better claim,
Because it was grassy and wanted wear;
Though as for that the passing there
Had worn them really about the same,

And both that morning equally lay
In leaves no step had trodden black.
Oh, I kept the first for another day!
Yet knowing how way leads on to way,
I doubted if I should ever come back.

I shall be telling this with a sigh
Somewhere ages and ages hence:
Two roads diverged in a wood, and I—
I took the one less traveled by,
And that has made all the difference.

Stopping by Woods on a Snowy Evening*

Whose woods these are I think I know.
His house is in the village though;
He will not see me stopping here
To watch his woods fill up with snow.

My little horse must think it queer
To stop without a farmhouse near
Between the woods and frozen lake
The darkest evening of the year.

He gives his harness bells a shake
To ask if there is some mistake.
The only other sound’s the sweep
Of easy wind and downy flake.

The woods are lovely, dark and deep,
But I have promises to keep,
And miles to go before I sleep,
And miles to go before I sleep.

*Lars Peter Hansen and Andrew Lo’s favorite Robert Frost poem
MAILING ADDRESS
White Mountain National Forest
310 Mount Washington Hotel Road
Bretton Woods, NH 03575

TELEPHONE  603.278.1000
### Activities

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<td>Alpine skiing, snowshoeing, scenic lift rides, indoor &amp; outdoor climbing, mountain biking, disc golf, Kinderwoods playground</td>
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### Conference

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### Dining & Cocktails

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<tr>
<td>1</td>
<td>Omni Mount Washington Hotel The Dining Room, Stickneys, Rosebrook Bar, Princess Room, The Cave</td>
</tr>
</tbody>
</table>
| 9 | Golf Club/Nordic Center (seasonal) The Grille  
| 13| Omni Bretton Arms Inn                                                                                     |
| 19| Bretton Woods Ski Area/Adventure Center (seasonal) Slopeside Restaurant & Pub, Lucy Crawford's Kitchen  |
| 21| Latitude 44 Restaurant (seasonal)                                                                          |
| 23| Fabyans Station                                                                                            |

### Shopping

<table>
<thead>
<tr>
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<th>Shopping</th>
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<tbody>
<tr>
<td>1</td>
<td>Omni Mount Washington Hotel Cabots, Morsels, The Flower Shop, Critters, The Spa</td>
</tr>
<tr>
<td>9</td>
<td>Golf Club/Nordic Center TreeTop Golf/Nordic</td>
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<tr>
<td>19</td>
<td>Bretton Woods Ski Area/Adventure Center (seasonal) TreeTop Sports, Nash's General Store, Chutters</td>
</tr>
<tr>
<td>24</td>
<td>Bretton Woods Station Gas, sundries</td>
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</table>

### Lodging

<table>
<thead>
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<tr>
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<td>Omni Mount Washington Hotel</td>
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<tr>
<td>13</td>
<td>Omni Bretton Arms Inn</td>
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<tr>
<td>15</td>
<td>The Lodge</td>
</tr>
<tr>
<td>18</td>
<td>Townhome Check-in (Rosebrook Recreation Center)</td>
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<tr>
<td>25</td>
<td>Crawford Ridge</td>
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<tr>
<td>26</td>
<td>Fairway Village</td>
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<tr>
<td>27</td>
<td>Forest Cottage</td>
</tr>
<tr>
<td>28</td>
<td>Mountain Views</td>
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<tr>
<td>29</td>
<td>Mt. Madison</td>
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<td>30</td>
<td>Mt. Washington Place</td>
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<tr>
<td>31</td>
<td>Presidential Views</td>
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<tr>
<td>32</td>
<td>River's Edge</td>
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<td>33</td>
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<td>34</td>
<td>Stickney Circle</td>
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<tr>
<td>35</td>
<td>Stonehill</td>
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