The Research Group





2017/2018

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Director of Research Beverly Hirtle

To Prospective Job Candidates:

We're pleased that you're interested in joining the Federal Reserve Bank of New York's Research and Statistics Group.

The New York Fed stands at the center of the national and world economies, playing a major role in the formulation and execution of monetary policy, the operation of payments systems, and the supervision and oversight of financial institutions and markets. Our leadership position has been especially evident as the Bank works to sustain the recovery and achieve a more stable financial system. To perform to the highest standards in such a demanding environment, we look to our stellar group of economists to provide analysis and advice based on rigorous research and a comprehensive knowledge of the issues.

To maintain our strong research capability, we're continually adding to our team of economists. We seek to attract and retain the most highly qualified individuals by creating an environment that's rich in opportunities. We offer our economists not only direct engagement in policy at senior levels but also broad flexibility to pursue independent research. We have in place—and are committed to maintaining a distinguished research program that sets a high value on publication in the top professional journals. And our own research series and *Liberty Street Economics* blog offer economists important outlets to disseminate their research to a broader audience. Our economists also participate in leading academic and policy conferences and work closely with our distinguished visiting academics, who in recent years have included Kenneth D. West of the University of Wisconsin and Peter Diamond of MIT.

We're excited by the many challenges and opportunities offered by the New York Fed. We're certain that you'll share in that excitement when you join our research team.

Benely Kees

Linda Goldberg, Financial Intermediation Function Global Research Forum on International Macroeconomics and Finance

A Vast Portfolio of Research Assets

The New York Fed's **Research and Statistics** Group combines leadingedge academic research with rigorous policy analysis in an intellectually dynamic and collegial environment. This brochure offers an overview of our research and policy work and describes the distinctive culture and resources of the Group. It also details the responsibilities of our seven Functions, identifies our current staff of economists, and highlights the economists' research interests and recent publications.

Our most important asset is our sixty Ph.D. economists, a concentration of expertise far larger than that of most university economics departments. Recognized as leading researchers in their fields, these individuals bring breadth and depth to their work in macroeconomics, banking, payments, finance, applied microeconomics, international economics, and regional analysis.

Our economists have compiled an impressive record of publishing in the most highly regarded economics and finance journals. Since 2001, ninety-seven articles by New York Fed economists have appeared in the American Economic Review, Econometrica, the Journal of Finance, the Journal of Financial Economics, the Journal of Political Economy, the Quarterly Journal of Economics, the Review of Economic Studies, and the Review of Financial Studies. Of particular note is the fact that in 2015, two articles by our economists were awarded the Journal of Finance's coveted Amundi Smith Breeden Prizes. Our economists' work is also extensively represented in the top field journals and in other important outlets.

New York Fed economists complement their publishing activities by serving on the editorial boards of leading journals.

OUR ECONOMISTS' CURRENT EDITORIAL BOARD ASSIGNMENTS

RAJASHRI CHAKRABARTI Education Finance and Policy

RICHARD CRUMP Journal of Empirical Finance

MARCO DEL NEGRO Journal of Applied Econometrics; Journal of Business and Economic Statistics; Review of Economics and Statistics

DOMENICO GIANNONE Journal of Business and Economic Statistics; International Journal of Forecasting; Journal of Applied Econometrics; Empirical Economics

LINDA GOLDBERG Journal of Financial Intermediation, Journal of Financial Services Research

ANDREW HAUGHWOUT Journal of Regional Science

ANTOINE MARTIN Journal of Money, Credit, and Banking

DONALD MORGAN Journal of Money, Credit, and Banking

PAOLO PESENTI Journal of International Economics

JOÃO SANTOS Journal of Financial Economic Policy; Journal of Financial Intermediation; Journal of Financial Services Research; Journal of Money, Credit, and Banking

ARGIA SBORDONE Macroeconomic Dynamics

ANDREA TAMBALOTTI Review of Economic Dynamics

WILBERT VAN DER KLAAUW Labor Economics; LABOUR: Review of Labour Economics and Industrial Relations

Adam Copeland Irent Copeland Irent Reserve Bank of New York Mr 5, 2017

Adam Copeland, Money and Payments Studies Function New York Fed–NYU Stern Conference on Financial Intermediation

OUR ECONOMISTS' RECENT TEACHING ACTIVITIES

OZGE AKINCI Columbia DONG BEOM CHOI Princeton RICHARD CRUMP NYU

MARCO DEL NEGRO Yeshiva University, Bank of Korea, CEMLA/Banco de México

ANDREAS FUSTER NYU

DAVID LUCCA NYU DONALD MORGAN Columbia, NYU ARGIA SBORDONE Columbia GIORGIO TOPA NYU JAMES VICKERY NYU

Our economists are highly visible in the profession, presenting research at preeminent colleges and universities worldwide. They have also given papers at the American Economic Association, the American Finance Association, the Bank for International Settlements, the Brookings Institution, the Centre for Economic Policy Research, the International Monetary Fund, the National Bureau of Economic Research, the U.S. Treasury Department, and the world's central banks.

A First-Year Plan Focusing on Research and Publication

In the Research Group, we recognize how important it is for new Ph.D. hires to get their research agenda under way as quickly as possible. For this group, the primary goal in the first year is to produce research and publish in the major journals. To that end, we have designed a first-year plan that allows new economists to devote a large majority of their time to developing publishable work. We provide additional support in the form of state-of-the-art computing capabilities, ready access to a wide range of economic data, and the assistance of highly trained research analysts.

In the first year, new Ph.D. economists also familiarize themselves with the New York Fed's policy missions by interacting with economists in their area and with other professionals Bankwide. They may contribute to a team working on a policy issue or help prepare a briefing on economic developments for the Bank's president and senior officers.

A Collegial Culture

The environment here fosters a high degree of collaboration and exchange. Economists routinely work together on policy initiatives, and this teamwork encourages a lively camaraderie that can be



missing in academic departments. In addition, economists regularly coauthor articles and make joint presentations. Adding to the collaborative nature of the Research Group is the frequent interaction between researchers examining the real and financial sides of the economy.

An Environment Where Ideas Flourish

The Research Group benefits greatly from the New York Fed's proximity to top-tier universities. In recent years, the Group has cosponsored conferences with institutions such as Columbia, Harvard, NYU, Penn, and Princeton. Our economists frequently give seminars at these and other institutions.

► TEACHING ACTIVITY. Economists enjoy the opportunity to teach while on staff—whether they take a leave of absence from the Bank or teach part-time while here.

► SABBATICAL PROGRAM. Our sabbatical program offers economists opportunities to concentrate fully on their own research. The program enables individuals pursuing a specific plan of study to devote up to 100 percent of their time to qualifying work.

Under the program, economists with four or more years of service at the Bank can apply to take between two and twelve months of leave. They receive 90 percent of their salary while on the first six months of leave and 75 percent during the next six months. Economists can also work part-time while on sabbatical if the employment



contributes to their professional development. For example, an economist can hold a visiting position at a university or other research institution, with limited teaching or other responsibilities.

Economists have taken advantage of the sabbatical program to work at such institutions as the Bank of Portugal, the Board of Governors of the Federal Reserve System, Columbia University, Columbia Business School, the Einaudi Institute for Economics and Finance, the European University Institute, New York University, NYU Stern, Princeton, Stanford, the Toulouse School of Economics, the University of Bern, the University of Lausanne, the University of Virginia, and Yale.

▶ VISITING SCHOLARS PROGRAM. To help maintain a stimulating and supportive environment for staff economists, we regularly invite economists from major research institutions to be visiting scholars at the Bank. The visitors present their own work and make themselves available to discuss our economists' current research.

► A GATEWAY TO ACADEMIA. The scope and seriousness of our research environment are reflected in our relationship with academia. Many of our more senior economists come from university economics and finance faculties. In turn, a number of our economists have gone on to accept faculty positions at prestigious colleges and universities, including Boston College, Brandeis, Brown, Columbia, Dartmouth, Georgetown, New York University, Notre Dame, Ohio State, Stony Brook University-SUNY, the University of Amsterdam,

the University of British Columbia, the University of California Santa Barbara, the University of Chicago, the University of Oxford, the University of Stockholm, and the University of Virginia.

▶ CONFERENCES. The New York Fed maintains an ambitious conference program, sponsoring or cosponsoring three to four major conferences and one or two workshops each year. During the 2016-17 academic year, these events addressed a range of important topics, including the effects of post-crisis regulatory reforms on the functioning of the over-the-counter derivatives markets, the appropriate role of government in mortgage finance, the part played by financial intermediaries in the creation and spread of information about financial assets, the changing forces behind international capital flows, and the causes and consequences of fluctuations in unemployment and wages. In terms of both the breadth and the sheer number of conference offerings, few university economics departments can rival the Fed.

The conferences draw an elite group of speakers and panelists from leading universities and business schools—including, in 2016-17, Peter Diamond, Giuseppe Moscarini, Carmen Reinhart, Hélène Rey, Hyun Song Shin, Paul Glasserman, Harrison Hong, Atif Mian, Robert Shiller, Deborah Lucas, and Andrew Metrick. For economists in the Research Group, these events provide an opportunity to interact with top academics in their own and other fields.

In addition, many Fed conferences provide a forum where policymakers join with both academics and industry representatives Giuseppe Moscarini, Professor of Economics, Yale University Keynote speaker, New Developments in the Macroeconomics of Labor Markets Conference

6000

to share their perspectives on economic problems. The exchanges among these groups have allowed Fed economists to convey their concerns about financial industry vulnerabilities to industry practitioners, and to engage academics in the exploration of policy questions not easily addressed through standard models. Not surprisingly, the dialogue generated at the conferences has often proved very fruitful, setting the direction for new research, calling attention to critical data shortages, or underscoring the need for further reforms.

▶ SEMINARS. The Research Group actively encourages participation in seminars and conferences. Ample funds are available for economists to travel to conferences in the United States and abroad. The Bank also provides travel support for those wishing to work with coauthors outside the Bank.

In addition, we offer a seminar series that attracts a broad group of distinguished speakers. We present several seminars a week—a clear indication of our commitment to the series.

Data Assets and Alliances

New York Fed economists have exceptional opportunities to join with others in the coordinated study of specialized economic data.

▶ CENTER FOR MICROECONOMIC DATA. The New York Fed's Center for Microeconomic Data, inaugurated in December 2013, has become an important hub for research on the expectations and behavior of individual economic agents. Bank economists affiliated with the Center develop and use microeconomic data and microeconometric techniques to examine key decisions taken by households and firms and to investigate the effects of fiscal and monetary policy on these groups.

Two large data collection projects anchor the Center: the Consumer Credit Panel and the Survey of Consumer Expectations. The Consumer Credit Panel gathers detailed quarterly data on the liabilities of a nationally representative sample of U.S. households. The data set is used to calculate national and regional measures of individual- and household-level credit balances and delinquencies by product type, including mortgages, credit cards, auto loans, and student loans. The Survey of Consumer Expectations collects information on a wide variety of household expectations regarding inflation, future earnings, household income, house prices, access to credit, layoff risk, and U.S. economic conditions overall. A third project, launched in early 2016, is gathering data from a panel of small businesses to shed light on trade credit, business formation, and firm dynamics.

While central banks are often thought to specialize in macroeconomic analysis, the data and research emerging from the Center for Microeconomic Data contribute importantly to the Fed's economic insight and policy decisions. The Center's regular releases on household credit conditions and the consumer outlook are also followed closely by government policymakers and the media, and *Continued on page 12*

VISITING SCHOLARS IN 2017

XIAOHONG CHEN Yale University

GORDON DAHL University of California, San Diego

RAFAEL DIX-CARNEIRO Duke University

WILL DOBBIE Princeton University

GAUTI EGGERTSSON Brown University

FRANCO FIORDELISI University of Rome **ERIC FRENCH** University College London

MARK GERTLER New York University

ITAY GOLDSTEIN University of Pennsylvania, Wharton School

TAL GROSS Columbia University

JUSTINE HASTINGS Brown University

KATE HO Columbia University **CHARLIE KAHN** University of Illinois, Urbana—Champaign

PETE KLENOW Stanford University

ADRIANA LLERAS-MUNEY University of California, Los Angeles

MAGNE MOGSTAD University of Chicago

MATTHEW NOTOWIDIGDO Northwestern University **GEORGE PENNACCHI** University of Illinois, Urbana—Champaign

GREG PHELAN Williams College

IMRAN RASUL University College London

RAFAEL REPULLO CEMFI

JOHN SABELHAUS University of Maryland

ADAM SACARNY Columbia University

PHILIP STRAHAN Boston College ROBERT TOWNSHEND

MATHIAS TRABANDT Frie Universität Berlin

ERNST-LUDWIG VON THADDEN University of Mannheim

ANDREW WINTON University of Minnesota

MICHAEL WOODFORD Columbia University

JONATHAN WRIGHT Johns Hopkins University





NEW YORK FED SEMINAR SERIES: SELECTED PRESENTATIONS, 2017

• "The Pricing of Tail Risk and the Equity Premium: Evidence from International Option Markets," **Torben Anderson**, Northwestern University, Kellogg School of Management

 "Nonlinear Panel Data Methods for Dynamic Heterogeneous Agent Models," Manuel Arellano, CEMFI

 "High-Frequency Trading and Market
 Performance," Markus
 Baldauf, University
 of British Columbia,
 Sauder School of
 Business

"Why Does
 Idiosyncratic Risk
 Increase with Market
 Risk?" Soehnke
 Bartram, Warwick
 Business School

 "Structural Interpretation of Vector Autoregressions with Incomplete Identification: Revisiting the Role of Oil Supply and Demand Shocks," Christiane Baumeister, University of Notre Dame

 "Firms, Sorting, and Gender Wage
 Differentials: Evidence
 from Employer Employee Matched
 Data," Mary Ann
 Bronson, Georgetown
 University

 "Spatial Equilibrium, Search Frictions, and Efficient Regulation in the Taxi Industry," Nicholas Buchholz, Princeton University • "Gainfully Employed? Assessing the Employment and Earnings of For-Profit College Students Using Administrative Data," Stephanie Cellini, George Washington University

 "Informed Trading and Option Prices: Evidence from Activist Trading,"
 Pierre Collin-Dufresne, Swiss Finance Institute

 "Moral Hazard in an Oligopolistic Insurance Market," Marco
 Cosconati, Bank of Italy

 "Incarceration, Recidivism, and Employment," Gordon Dahl, University of California, San Diego "Estimating
 Informational Frictions in Sticky Relationships,"
 Olivier Darmouni,
 Columbia Business
 School

 "Information Use in College Loan Decisions,"
 Rajeev Darolia, University of Missouri

 "Prepayment Risk and Expected MBS Returns," Andrea Eisfeldt, UCLA, Anderson School of Management

 "International Credit Supply Shocks," Andrea Ferrero, University of Oxford

• "Actors in the Child Development Process," *Chris Flinn*, New York University

 "Granular Comparative Advantage," Cecile
 Gaubert, University of California, Berkeley "Market Efficiency with Micro and Macro Information," Paul Glasserman, Columbia University

 "What Is the Source of the Intergenerational Correlation in Earnings?" *Limor Golan*, Washington
 University in St. Louis

• "Eyes Wide Shut? Mortgage Insurance during the Housing Boom," **Ben Keys**, University of Pennsylvania, Wharton School

 "Fiscal Rules, Bailouts, and Reputation in Federal Governments,"
 Rishabh Kirpalani, New York University

 "Missing Growth from Creative Destruction,"
 Pete Klenow, Stanford University





"Electoral Incentives and the Allocation of Public Funds," Maurizio Mazzocco, University of California, Los Angeles

■ "Optimal Automatic Stabilizers," Alisdair McKay, Boston University

"Long-Term Care Insurance and the Family," Corina Mommaerts, University of Wisconsin

"Earnings Inequality and the Minimum Wage: Evidence from Brazil." Christian Moser. Columbia Business School

• "Choosing Your Pond: Revealed-Preference Estimates of Relative Income Concerns." Ricardo Perez-Truglia, UCLA, Anderson School of Management

"Intermediaries as Safety Providers," Enrico Perotti, University of Amsterdam

■ "The History of the Cross Section of Stock Returns." Michael Roberts, University of Pennsylvania, Wharton School

"Bank Risk Taking" and the Real Economy: Evidence from the Housing Boom and Its Aftermath," David Scharfstein, Harvard Business School

"Cyclical Labor Supply" with Long-Term Jobs," Benjamin Schoefer, University of California, Berkeley

"Horizontal and Vertical Polarization: Task-Specific Technological Change in a Multisector Economy," Yongseok Shin, Washington University in St. Louis

■ "Fearing the Fed: How Wall Street Reads Main Street," Dongho Song, Boston College

■ "A Simpler Theory of Optimal Capital Taxation," Stefanie Stantcheva, Harvard University

"Macroeconomic Fluctuations with HANK and SAM: An Analytical Approach," Vincent Sterk, University College London

"Are Larger Banks" Valued More Highly?" René Stulz, Ohio State University

"House Prices and the Allocation of Consumer Credit," Mingzhu Tai, Harvard University

 "Skills, Job Tasks, and Productivity in Teaching: Evidence from a Randomized Trial," Eric Taylor, Harvard University

"Should We Use Linearized Models to Calculate Fiscal Multipliers?" Mathias Trabandt. School of Business and Economics at Freie Universität Berlin

"The Economics of the Fed Put," Annette Vissing-Jorgensen, University of California, Berkeley

"Marriage, Social Insurance, and Labor Supply," Alessandra Voena, University of Chicago

"Incentive-Constrained Risk Sharing, Segmentation, and Asset Pricing," Pierre-Olivier Weill, University of California, Los Angeles

"Stress Tests and Bank Portfolio Choice," Basil Williams, New York University

"Preferences for Tuition and the Role of Information," Ludger Woessmann, CESifo

■ "Mechanism Selection and Trade Formation on Swap **Execution Facilities:** An Analysis of CDS Trades," Haoxiang Zhu, MIT Sloan School of Management

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have helped shape public debate on issues such as the nation's growing student debt burden. Moreover, the Center's work has served as a catalyst for new research by academic economists, who often partner with our economists on studies of this rich body of household and firm data.

INTERNATIONAL BANKING RESEARCH NETWORK, Another important initiative of interest to new economist hires is the International Banking Research Network (IBRN), a community of central bank researchers who study global banks and their activities. Established in 2012 by a New York Fed economist and researchers from Austria, Germany, and the United Kingdom, the IBRN seeks to improve policy discussion by using banklevel regulatory data in the joint analysis of key questions. Researchers in the network have access to the micro data of the balance sheets of banks in their jurisdictions, a resource that allows them to design experiments and achieve results not possible with studies that use more aggregated data; moreover, by sharing the results of their analysis of the micro data with their IBRN colleagues, the researchers can draw lessons reflecting the experience of multiple countries. The usefulness of this approach to banking research is reflected in the steady expansion of the IBRN membership; the network now encompasses more than twenty-five central banks and international organizations.

The IBRN's first project, undertaken in 2013 and implemented by eleven countries, explored how funding shocks affecting parent banks were transmitted to foreign countries through cross-border banking activities. The network's second project, begun in 2014, examined the effects of macroprudential policy changes on global banks' lending and funding in their home countries and abroad. Researchers from sixteen central banks, the Bank for International Settlements, the International Monetary Fund, and the European Systemic Risk Board participated in the project, which illuminated why banks in different countries may have responded differently to policies enacted in the wake of the global financial crisis. Currently, the network is focusing its efforts on the little-understood subject of international monetary spillovers. Research teams are investigating the channels through which countries' conventional and unconventional monetary policy actions are affecting international as well as domestic lending.

▶ NEW YORK FEDERAL STATISTICAL RESEARCH DATA CENTER. In 2005, the Research Group, acting on behalf of the New York Fed, helped establish a U.S. Census Bureau Research Data Center in New York City, now part of the Federal Statistical Network. The Bank is a member of the consortium that supports the data center, joining other leading universities and research organizations in New York State.

The presence of the Federal Statistical Research Data Center in the New York area facilitates an important strand of empirical research in the Bank and the region. At the center, researchers who have completed a rigorous project review process can access in a secure facility selected confidential firm and individual micro data gathered by the U.S. Census Bureau and many other federal partners, such as the Bureau of Labor Statistics and the Agency for Healthcare Research and Quality.

The New York Fed's consortium membership entitles Research Group economists to use the facility to conduct research with no additional lab fees or the need to travel.

A Rich Computing Environment

Our state-of-the-art Research computing environment offers economists a wide array of technology resources, the ability to take advantage of real and financial data series, and electronic access to academic journals. Dedicated information technology and automation support services are available to meet researchers' individual needs.

Extensive Professional Support

A superb group of administrative, editorial, design, development, and library professionals provide support for economists' research efforts and ensure the effective communication of research findings.

Joining this group of support personnel are roughly forty research analysts, who offer skilled and energetic assistance gathering data, conducting statistical analysis, and preparing materials for presentations.

Our RAs are typically recent college graduates who intend to pursue a Ph.D. in economics. Seventy percent of the Research Group's RAs in the last five years have gone on to graduate school, many to top-five programs in economics. In addition, our research analysts did extraordinarily well this year in the competition for National Science Foundation fellowships, securing five of the roughly thirty awards given for graduate study in the field of economics.

Wide Internet Exposure

Personal web pages residing on the New York Fed's public site, www.newyorkfed.org/research/economists/, heighten economists' visibility in the academic, policy, and business communities.

The pages feature the economist's biography and field of interest as well as links to curricula vitae, publications and working papers, and social-media output. These pages are among the most visited on our website.

Liberty Street Economics Blog

The *Liberty Street Economics* blog, launched in 2011, provides a way for our economists to bring their research to the attention of a broader public. The posts, written in an accessible style, attract

large numbers of readers and receive frequent attention from the media and from financial bloggers in particular.

Liberty Street Economics publishes three posts per week, more when key topics are explored in detail. To generate dialogue with the public, it also posts reader comments and author responses. For the year ended June 2017, the blog featured 100 economics posts.

The Economic Policy Review

While economists are encouraged to publish in external journals, they also reach a large and influential audience by publishing in the Bank's *Economic Policy Review*. The review features new policy-oriented research by New York Fed economists, papers by affiliated economists, and the proceedings of Bank-sponsored conferences.

KEY FEATURES OF THE RESEARCH COMPUTING ENVIRONMENT

- A high-performance
 computing environment of
 Linux clusters. In Research,
 parallel computing is
 performed by multiple
 clusters with high-speed
 networks connecting
 hundreds of processors.
 Application servers support
 parallel and serial work, with
 standard and specialized
 econometric software
 resources available in the
 office or remotely.
- Data. A full range of economic and financial data is available for independent research projects as well as for use in monetary policy initiatives associated with a wide variety of research topics.
- Robust data-storage solutions. Our Research Storage Area Network, with the capacity to store hundreds of terabytes of data, supports analysis of large data sets on the Bank's network and is protected by access controls, backups, and contingency locations.

Access to software

resources. Numerous econometric software packages and modules are available, including MATLAB, Stata-MP, Mathematica, SAS Grid, Python, Julia, Fortran, the R programming language, EViews, GAUSS, and ArcGIS. Technical word-processing packages, such as Scientific Workplace and WinEdt, are fully supported. Efficient and easy-to-use versioning packages such as SmartGit are readily available.

A separate Research network for collaboration with external colleagues. The flexible Research

Accessible Network (RAN) supports economists' academic work and collaboration by providing convenient access to internet resources from inside the Bank as well as access to Research Group resources from outside the Bank through the internet. This network also supports access to a high-performance computing cluster.

- Access to cloud computing. External high-performance clusters and graphics processing units (GPUs) are available for academic research projects.
- Access to the Bank's secure network. The Bank's secure internal network can be used to conduct important policy work as well as to access email, internal Federal Reserve System websites, and productivity applications and utilities.
- Versatile workstation options. A customizable environment of Windows, Linux, and Mac desktop, laptop, and virtual solutions can be combined to meet economists' research needs. A virtual workstation option affords simultaneous access to the Bank network and the RAN through one device. A variety of peripherals including large monitors,

secure external hard drives, high-end color printers, and secure USB drives complement these work-station features.

- Convenient remote access. An array of automated tools streamlines research conducted at home or while traveling; BlackBerry and iPhone devices are available for mobile communication.
- A committed team of technical support specialists. The Technology Services group provides local, specialized services dedicated to the computing needs of Research economists. They work alongside economists and are available via PC, email, and phone. In addition. the team works closely with the National Service Desk, which is available 24/7, to provide integrated solutions for the Research Group's network computing business needs.

Resident Scholars Program

Our Program for Resident Scholars attracts to the Bank outstanding researchers with international reputations. For 2016-17, the Bank hosted Kenneth D. West and Peter Diamond as resident scholars. enneth D. West is the John D. MacArthur and Ragnar Frisch Professor of Economics at the University of Wisconsin-Madison. Professor West has published widely in the fields of macroeconomics, finance, international economics, and econometrics. He has held visiting positions at the European Central Bank, the Reserve Bank of Australia, the Bank of Brazil, the Einaudi Institute for Economics and Finance, the Board of Governors of the Federal Reserve System, and the Federal Reserve Banks of Atlanta, St. Louis, and Kansas City. Professor West has been a co-editor of the *Journal of Money, Credit, and Banking* since 2001 and previously served as co-editor of the *American Economic Review*. He is a Fellow of the Econometric Society and has been the recipient of the Alfred P. Sloan Research Fellowship, and the John M. Stauffer National Fellowship in Public Policy at the Hoover Institution.

Peter Diamond is an Institute Professor Emeritus at MIT, where he taught from 1966 to 2011. Professor Diamond has written on public finance, social insurance, behavioral economics, uncertainty and search theories, and macroeconomics. He has been President of the American Economic Association, of the Econometric Society, and of the National Academy of Social Insurance. Together with Dale T. Mortensen and Christopher A. Pissarides, Professor Diamond was awarded the 2010 Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel for theoretical research on search frictions in markets.

Resident scholars, selected from the top academic and policy institutions in areas related to the Bank's broad policy interests, join the Bank for a stay of several months. While in residence, they are considered members of the Research Group and are given access to resources on the same basis as other key Bank staff.

The scholars pursue their own research while providing intellectual leadership by advising and collaborating with our economists. They present their work at Group seminars and attend presentations by others. Resident scholars also work closely with the research director and have the opportunity to contribute to the Bank's policymaking discussions on such topics as monetary policy and macroeconomics, banking regulation, capital markets, financial stability, and applied microeconomics.



FORMER RESIDENT SCHOLARS

MARK J. FLANNERY

Bank of America Eminent Scholar in Finance, University of Florida

DOUGLAS GALE

Silver Professor and Professor of Economics, New York University

MARK GERTLER

Henry and Lucy Moses Professor of Economics, New York University

ERIC GHYSELS

Edward M. Bernstein Distinguished Professor of Economics, University of North Carolina at Chapel Hill

SIMON GILCHRIST

Professor of Economics, Boston University

NOBUHIRO KIYOTAKI Professor of Economics, Princeton University

JOHN LEAHY Professor of Economics, New York University

CHRISTOPHER SIMS

Professor of Economics, Princeton University

SURESH M. SUNDARESAN

Chase Manhattan Bank Foundation Professor of Financial Institutions, Columbia Business School

S. VISH VISWANATHAN Duke University

JIANG WANG

Mizuho Financial Group Professor, MIT Sloan School of Management

Our Economists at a Glance: Current Research

Our economists engage in a variety of innovative research projects, some reflecting their independent research interests and others grounded in their policy work for the Bank. Here are just a few examples: JAISON ABEL Empirical research on the microfoundations of urban agglomeration economies and the spatial distribution of human capital.

SUSHANT ACHARYA Theoretical research on information-constrained decision making, the provision of safe assets in liquidity traps, the role of sentiments in explaining economic fluctuations, and labor contracts and their impact on macro outcomes.

OZGE AKINCI Research on spillovers from U.S. monetary policy normalization to emerging countries subject to volatile capital flows and currency mismatches; boom-bust credit cycles in open economies.

MARY AMITI Trade finance; effects of trade liberalization on productivity, prices, wages, the wage skill premium, and product quality.

NINA BOYARCHENKO Research examining how large financial institutions participate in credit markets and how these choices affect the pricing and liquidity of credit instruments.

RAJASHRI CHAKRABARTI, ANDREW HAUGHWOUT, DONGHOON LEE, WILBERT VAN DER KLAAUW Effects of student lending on the economy; origination and delinquency trends in household debt, including mortgage debt. **DONG BEOM CHOI** Theoretical and empirical research on monetary policy transmission with financial frictions; liquidity and financial stability.

RICHARD CRUMP Econometric research on asset price dynamics, with a focus on risk premium modeling and forecasting.



Mary Amiti



Matthew Plosser

MARCO DEL NEGRO Forecasting and policy analysis using dynamic stochastic general equilibrium models.

KESHAV DOGRA Theoretical research on fiscal policy during liquidity traps.

THOMAS EISENBACH Research on the effect of horizon-dependent risk aversion on individual behavior and equilibrium asset prices.

STEFANO EUSEPI Research on the implications of different theories of expectations formation for monetary and fiscal policy design.

ANDREAS FUSTER Empirical research on mortgage markets, the Fed's mortgage-backed securities purchases, and the pricing of prepayment risk.

DOMENICO GIANNONE Nowcasting, forecasting, and policy analysis with big data.

LINDA GOLDBERG Research on international financial flows, focusing on global banks and nonbank financial intermediaries, advanced-economy monetary policies and risk conditions, and prudential policy tools.

PAUL GOLDSMITH-PINKHAM

Empirical research assessing the role of consumer debt in the macroeconomy and evaluating the costs and benefits of debtor protection and social insurance policies.

SEBASTIAN HEISE Empirical and theoretical research on producer prices and customer-supplier relationships in international trade; research on the spatial mobility of workers.

FATIH KARAHAN The role of geographical mismatch in unemployment during the Great Recession; the persistence of earnings shocks over the life cycle; the effect of the returns to skills on the college premium.

GIZEM KOSAR Empirical and theoretical research on public assistance programs, taxes, and consumer bankruptcy.

ANNA KOVNER Empirical research on systemic risk and banking; the effects of post-crisis financial regulation.

GABRIELE LA SPADA Theoretical and empirical research on moneylike assets and monetary policy transmission through mutual funds.

DONGHOON LEE Empirical research on consumer credit, the mortgage market, student loans, and household finance.

DAVID LUCCA Research on the economics of supervision for large, complex financial institutions and on the monetary policy transmission mechanism.

LAURA PILOSSOPH Empirical and theoretical research on the sources of long-term unemployment and on the connection between assortative matching and income inequality. MAXIM PINKOVSKIY Empirical research on inequality and welfare measures and on the determinants of economic growth; analysis of macroeconomic and labor market impacts of health policy, including the Affordable Care Act.

MATTHEW PLOSSER Empirical research related to the supervision and regulation of financial institutions, household borrowing behavior, private equity, and monetary policy announcement effects.

AYŞEGÜL ŞAHIN Theoretical and empirical research on labor market dynamics, with an emphasis on the causes and consequences of long-run labor market trends.

ASANI SARKAR Research on systemic risk, the effects of post-crisis liquidity regulations, and bitcoin.

GIORGIO TOPA Empirical research on referrals in the labor market, on job search, and on subjective expectations; survey data collection.



Asani Sarkar

The Research Group's Policy Work

Our economists engage in policy-oriented analysis of a wide range of important issues. Their analysis helps guide the Federal Reserve's assessment of the economy, formulation of monetary policy, and monitoring of financial system stability. In 2016, the Research Group began work on a major policy initiative to explore the post-crisis persistence of low interest rates in the United States. Understanding the forces behind this phenomenon is particularly important for the conduct of monetary policy: In a low rate environment, nominal interest rates are much more likely to hit the zero lower bound, leaving central banks less latitude to counter negative economic shocks. Such an understanding is also informative for our researchers' assessment of the current and future state of the macroeconomy.

The initiative has engaged economists from across the Group. Macroeconomists have investigated the extent to which the "headwinds" created by the nation's slow recovery from the Great Recession might be a source of the persistent low rates; they have also taken the lead in considering the implications of low rates for monetary policy. International economists have studied the global dimensions of the phenomenon, including potential international spillovers from the monetary actions undertaken by the United States and by foreign central banks. Financial economists have looked at the implications of the low interest rate environment for risk premia across asset classes, and microeconomists have used data on households' income and consumption to illuminate the impact of demographics on saving behavior—another potential piece of the low-rate puzzle.

The project is envisioned as a three-year effort, and the work is still in the discovery phase. To date, the economists have reported their findings in several briefings with New York Fed Bank president William Dudley and other senior Bank officials. In a first effort to put forward a hypothesis about the causes of the low rates more formally, four macroeconomists—Marco Del Negro, Domenico Giannone, Marc Giannoni, and Andrea Tambalotti—presented the paper "Safety, Liquidity, and the Natural Rate of Interest" at the spring 2017 Brookings Institution conference. The paper, which will be published in *Brookings Papers on Economic Activity*, attributes the low interest rates in the



Donghoon Lee, Microeconomic Studies Function, at a briefing



United States primarily to the scarcity of safe and liquid assets, especially Treasury securities—a shortage that, exacerbated by the financial crises of the last decade, has become an increasingly prominent feature of the global economic landscape.

Individually, our seven research Functions apply their particular expertise to a wide range of other policy responsibilities:

CAPITAL MARKETS contributes to the formulation and implementation of monetary policy and the monitoring of market and financial stability by developing new analytical tools and providing rigorous analysis to senior Bank management. Recent work by the staff analyzes transparency in over-the-counter markets, dealer positioning, liquidity in fixed-income markets, the pricing of the term structure of interest rates and credit, the inflationary expectations embedded in financial market prices, the vulnerability of financial institutions to systemic risk, the links between financial intermediary balance sheet management and asset price dynamics, and the economics of supervision for large, complex financial institutions. The **FINANCIAL INTERMEDIATION** staff conducts research and policy analysis on issues relating to financial intermediation and financial markets, including the behavior and health of financial institutions, financial market innovation, and the development of supervisory tools and techniques. Economists examine these issues from both a macroeconomic and a microeconomic perspective, with an emphasis on the performance and stability of financial markets and core institutions. Recently, they have studied the evolution of the banking industry, frictions in the mortgage securitization process, bank funding patterns, the role of central bank liquidity provision, credit derivatives and other financial innovations, and risk management and corporate governance issues.

INTERNATIONAL RESEARCH economists conduct research and policy analysis on global macroeconomic, trade, and finance issues affecting the economy and monetary policy of the United States. Recent topics examined include international policy coordination, unconventional monetary policies, cross-border financial flows, commodity prices, and risk premiums in international bond and currency markets.

In MACROECONOMIC AND MONETARY STUDIES, economists advise senior Bank management on monetary policy issues through regular briefings in advance of each FOMC meeting. They monitor and analyze current economic and financial conditions and assess risks to the outlook. Economists provide forecasts and nowcasts for the U.S. economy using modern statistical and structural methodologies, including a nowcasting platform and the Bank's own estimated DSGE model, to accompany more traditional judgmental forecasts. In recent work, Function economists have introduced new measures of labor market slack using firm- and household-level data on job-to-job transitions and earnings growth, and they have used the Bank's DSGE model to estimate the economy's natural rate of interest, a useful reference point for setting monetary policy. Other notable efforts include quantifying the effects of changes in financial conditions on the economy and producing a term structure of inflation expectation using a large set of survey measures.

MICROECONOMIC STUDIES contributes to monetary policy formulation and financial stability by providing policy advice on a wide variety of subjects, ranging from auction design to state and local fiscal policy, with a special focus on consumer behavior. The Function also plays a unique role in the development of new micro data sets that enable the Bank to formulate accurate and fact-based policy responses, including the Consumer Credit Panel, the student loan data set, the Survey of Consumer Expectations, and—with the Regional Analysis Function—regional business surveys.

MONEY AND PAYMENTS STUDIES analyzes the infrastructure at the heart of the financial system. Key elements of study are the interbank and money markets—such as the federal funds, repo, and other over-the-counter markets—as well as payments and settlement systems. Recent work includes analyzing activity in the federal funds markets, drafting proposals aimed at improving monetary policy implementation, assessing the stability of repo and other short-term funding markets, understanding the historical evolution of the financial sector, and examining the failure and resolution of large financial firms. The Function has also analyzed strategies for mitigating risk in payments and settlement systems.

The **REGIONAL ANALYSIS** staff analyzes and monitors regional economic conditions, with an emphasis on developments in the Second Federal Reserve District. Research findings are presented to Bank senior management as well as to the District's broader business, research, and policy communities and to the public. Staff members produce the Empire State Manufacturing Survey and the Business Leaders Survey, monthly indexes of coincident economic indicators, and the Beige Book report. Recent areas of analysis include human capital and local economic development, the magnitude and sources of urban agglomeration economies, regional wage inequality, the relationship between prices and rents in New York City, the competitiveness of Puerto Rico's economy, and the labor market for recent college graduates after the Great Recession.

The Interplay of Research and Policy

Academic research and policy analysis can give rise to great synergies at the New York Fed. Many economists find that their policy work informs their research very directly. A case in point is the work conducted by Andreas Fuster and Andrew Haughwout on the resiliency of the U.S. housing market. As part of their normal policy responsibilities, the two economists help monitor financial system stability—Fuster, by analyzing the performance of financial markets and firms, and Haughwout, by examining developments in household and public finance. In 2016, motivated by the recognition that mortgage defaults contributed heavily to the destabilization of the financial system that precipitated the Great Recession, Fuster and Haughwout undertook a joint research effort to assess the current vulnerability of U.S. mortgage holders to adverse price shocks.

For their investigation, the authors used a novel data set available to New York Fed researchers that combines loan-level data on residential mortgages with data on borrower creditworthiness. Tracking the evolution of housing leverage—the ratio of housing debt to housing values—from 2005 to 2016, they found that leverage rose sharply from the start of the period through 2012, when housing prices began to recover, and then steadily dropped to levels near pre-crisis lows by early 2016. To gain a finer measure of the resiliency of residential mortgages, the authors then conducted stress tests of mortgage-holding households, simulating the recession's peak-to-trough price drop and other price declines to see how leverage would be affected if adverse conditions were to return. The authors concluded that while the riskiness of the household sector has fallen significantly since the crisis, the sector remains vulnerable to very severe price declines.

Like much of the research conducted at the New York Fed, Fuster and Haughwout's investigation of risks in the mortgage finance sector has important policy implications. The authors' findings offer an early warning of possible problems in a key sector of the economy and provide an impetus for policymakers to take steps to address the weakness. The results have been presented in a *Liberty Street Economics* blog series on housing and home ownership and will be published in an upcoming article in the Bank's *Economic Policy Review*. The authors plan to update and release the stress test results semiannually going forward.

The complementarities between economists' policy assignments and research are also evident in the recent work of financial economists Marco Cipriani and Gabriele La Spada on money market funds (MMFs). In a joint policy project with the Bank's Markets Group, Cipriani, La Spada, and research analyst Philip Mulder investigated the effects of regulations implemented by the Securities and Exchange Commission (SEC) in 2016 to prevent destabilizing runs in the MMF industry. The regulations require institutional prime funds-one sector of the industry-to price their shares according to the market value of the underlying securities rather than maintaining a fixed share price of \$1.00; the rules also require all prime funds to adopt a system of redemption gates and fees in times of financial stress. The team's analysis of the new rules, documented in a March 2017 Liberty Street Economics post, showed that the reform led to massive outflows of funds from the prime MMF sector into government MMFs, which were not affected by the regulations.

To examine the reactions of MMF investors and portfolio managers to the SEC rules in more detail, Cipriani, La Spada, and Mulder in June released a longer analysis in the Bank's working paper series. In their paper, intended for eventual publication in an academic journal, the authors note that under the new rules, investment in the prime MMF sector lost some of the characteristics of money it had previously enjoyed, whereas investment in the government MMF sector did not. The authors then argue that after the new SEC regulations took effect, the large outflow from prime into government funds was consistent with investors' trying to preserve the close correspondence of their MMF investment to money—a pattern that contrasts markedly with earlier shifts in MMF industry composition, which stemmed principally from changes in investors' perception of, or appetite for, risk.

The authors' findings support a recent academic literature postulating that investors have a preference for money-like assets. The authors provide concrete evidence of this preference and produce a specific estimate of its extent by analyzing the behavior of the spread between the yields on prime and government MMFs. Since investors' preference for money-like assets has not yet been formally modeled in the literature, Cipriani and La Spada's work demonstrates how New York Fed economists, through their engagement with policy issues, have been able to push forward the research frontier in their field.

Opportunities to Share Policy Work Externally

While policy assignments stimulate new research, the relationship is a reciprocal one: our economists' research regularly finds many applications to policy responsibilities. These applications often take the form of new tools for assessing the state of the economy or for analyzing the forces behind a variety of economic developments. Economists who succeed in translating their research into tools of this kind will have significant opportunities to share their policy innovations with other researchers and the public.

In recent years, for example, the Research Group has used the Bank's website and *Liberty Street Economics* blog to showcase the forecasting tools developed by our economists. Beginning in 2014, members of the Macroeconomic Studies Function made the blog their platform for presenting regular forecasts of output and inflation from the Bank's DSGE model. In April 2016, others in the Group began weekly web releases of the New York Fed Staff Nowcast, a "real-time" estimate of current- and next-quarter GDP growth computed from a wide range of high-frequency economic data. This year saw the introduction of an interactive version of the Nowcast, an important innovation that allows users to visualize the impact of incoming data on the estimates produced by our economists' model.

In a further effort to share the Bank's forecasting work with a broader audience, our economists have implemented the estimation of the New York Fed's DSGE model in the free, open-source programming language Julia and posted the code on Github, a web-based hosting service. This year, they extended the codes available in Julia to include those needed to produce economic forecasts and to infer unobservable variables such as the natural rate of interest and the output gap.

In September 2017, the Group will begin publishing monthly updates of another policy product, the Underlying Inflation Gauge (UIG). A measure of the long-run, or persistent, component of aggregate inflation, the UIG has proved especially useful in detecting turning points in trend inflation and has outperformed core inflation measures in tests of forecast accuracy. The UIG updates, like the DSGE and Nowcast releases, will give the public and the research community greater insight into the tools the New York Fed employs for policy analysis and prediction.



Research Functions and Personnel



Director of Research Beverly Hirtle

Beverly Hirtle is an executive vice president and head of the Research and Statistics Group at the Federal Reserve Bank of New York. Appointed research director in September 2016, Beverly is responsible for the economic and financial policy analysis prepared by the Group, including briefings in support of the Bank president's participation in the FOMC. She is also a member of the Bank's Management Committee.

Beverly joined the Bank in 1986 as an economist in the Domestic Financial Markets Function. Prior to becoming research director, she was a senior vice president in the Financial Intermediation Function. Her career at the Bank also includes a four-year assignment in a research-oriented unit within the Supervision Group charged with analyzing domestic and international supervisory policy issues.

Beverly has worked extensively on issues relating to bank capital adequacy and supervisory stress testing, and on the calibration of regulatory capital requirements. Among her other roles, Beverly was deputy chair of the Federal Reserve Model Oversight Group, which oversees the design and implementation of the Comprehensive Capital Analysis and Review and Dodd-Frank Act stress tests. In addition, she is a member of the Large Institution Supervision Coordinating Committee, which coordinates the Federal Reserve's supervision of large, complex financial institutions, and recently coauthored a paper describing the Bank's supervision of these firms.

Beverly's academic research includes work on stress testing and bank supervision, as well as bank holding company dividend and repurchase activity, disclosure and risk management, the impact of derivatives on bank risk and credit supply, and recent trends in retail banking activity. She has published in a number of journals, including the Journal of Financial Intermediation, the Journal of Banking and Finance, and the Journal of Money, Credit, and Banking.

Beverly holds a B.A. in economics and American studies from Amherst College and a Ph.D. in economics from MIT.

Capital Markets

The Capital Markets Function conducts research and policy analysis on asset pricing and market microstructure and on the interaction between markets, institutions, and the macroeconomy. A close working relationship with the Bank's Trading Desk, well-established contacts with market participants, and strong ties to business school finance departments create a unique environment for financial market research.

RECENT RESEARCH TOPICS INCLUDE:

- liquidity in equity, fixed-income, and derivatives markets,
- the interaction between financial institutions' balance sheets and market liquidity,
- estimation of risk premia in equity, fixed-income, and derivatives markets,
- analysis of financial market stress and the measurement of systemic risk,

- risk management and stress test design,
- macroprudential policy and monetary policy, and
- the links between financial markets and the macroeconomy.



Nina Boyarchenko

CAPITAL MARKETS STAFF

NINA BOYARCHENKO Ph.D., Chicago, 2011 INTERESTS: Asset pricing; macroeconomics; market liquidity.

RICHARD CRUMP Ph.D., UC Berkeley, 2009 INTERESTS: Econometric theory; financial economics.

FERNANDO DUARTE Ph.D., MIT, 2011 INTERESTS: Asset pricing; macroeconomics;

monetary policy.

MICHAEL FLEMING Ph.D., Harvard, 1994 INTERESTS: Market microstructure; financial intermediation; monetary policy.

ANDREAS FUSTER Ph.D., Harvard, 2011 INTERESTS: Household finance; real estate finance; behavioral economics. DAVID LUCCA

Michael Fleming

Ph.D., Northwestern, 2006 INTERESTS: Asset pricing; macroeconomics; monetary policy.

OR SHACHAR Ph.D., NYU, 2013 INTERESTS: Market frictions; credit risk; financial econometrics.

PETER VAN TASSEL Ph.D., Princeton, 2015 INTERESTS: Financial economics; asset pricing; option pricing.

DESI VOLKER Ph.D., Copenhagen Business School, 2016 INTERESTS: Asset pricing; fixed income; macro-finance.



Andreas Fuster



Peter Van Tassel



Desi Volker

RECENT PUBLICATIONS AND PAPERS

NINA BOYARCHENKO

"Term Structures of Asset Prices and Returns," with David Backus and Mikhail Chernov. Journal of Financial Economics, forthcoming.

RICHARD CRUMP

"Fundamental Disagreement," with Philippe Andrade, Stefano Eusepi, and Emanuel Moench. *Journal of Monetary Economics* 83, no. 1 (2016).

FERNANDO DUARTE

"Financial Vulnerability and Monetary Policy," Federal Reserve Bank of New York Staff Reports, no. 804 (2017).

MICHAEL FLEMING

"Dealer Financial Conditions and Lender-of-Last-Resort Facilities," with Viral Acharya, Warren B. Hrung, and Asani Sarkar. *Journal of Financial Economics* 123, no. 1 (2017).

ANDREAS FUSTER

"Securitization and the Fixed-Rate Mortgage," with James Vickery. *Review of Financial Studies* 28, no. 1 (2015).

DAVID LUCCA

"The Pre-FOMC Announcement Drift," with Emanuel Moench. Journal of Finance 70, no. 1 (2015). Winner of the 2015 Amundi Smith Breeden Prize for best paper.

OR SHACHAR

"Dealer Balance Sheets and Bond Liquidity Provision," with Tobias Adrian and Nina Boyarchenko. Journal of Monetary Economics, Carnegie-Rochester-NYU Conference Series on Public Policy, forthcoming.

PETER VAN TASSEL

"Global Variance Term Premia and Intermediary Risk Appetite," with Erik Vogt. Federal Reserve Bank of New York *Staff Reports*, no. 789 [2016].

DESI VOLKER

"Monetary Policy Uncertainty and Interest Rates." Unpublished paper, December 2016.

Financial Intermediation

The Financial Intermediation staff conducts research and policy analysis on a host of issues relating to financial intermediation and financial markets, including the behavior and health of financial institutions, financial market innovation, and the development of appropriate supervisory tools and techniques. Economists examine these issues from both a macroeconomic and a microeconomic perspective, with an emphasis on the performance and stability of financial markets and core institutions.

RECENT RESEARCH TOPICS INCLUDE:

- the effectiveness of bank supervision,
- the evolution of the banking industry,
- the implications of credit securitization,
- the changes in bank funding patterns,
- the role of central bank liquidity provision,
- credit derivatives and other financial innovations, and
- issues related to banks' risk management and corporate governance.





Nicola Cetorelli

FINANCIAL INTERMEDIATION STAFF

GARA AFONSO

Ph.D., London School of Economics and Political Science, 2008 INTERESTS: Financial economics; liquidity; financial stability; interbank markets.

NICOLA CETORELLI

Ph.D., Brown, 1996 INTERESTS: Banking; industrial organization; corporate finance; bank finance and real activity.

DONG BEOM CHOI

Ph.D., Princeton, 2012 INTERESTS: Financial economics; banking; monetary policy transmission; financial stability.

LINDA GOLDBERG

Ph.D., Princeton, 1988 INTERESTS: International macroeconomics; international banking and finance; international roles of the dollar. PAUL GOLDSMITH-PINKHAM Ph.D., Harvard, 2015 INTERESTS: Consumer finance; networks; econometrics.

SEAN HUNDTOFTE

Ph.D., Yale, 2016 INTERESTS: Household finance; financial intermediation; behavioral economics; real estate.

ANNA KOVNER

Ph.D., Harvard, 2008 INTERESTS: Corporate finance; banking; venture capital and private equity.

DONALD MORGAN

Ph.D., Wisconsin, 1989 INTERESTS: Household finance; personal bankruptcy; information frictions and macroeconomic activity.

MATTHEW PLOSSER

Ph.D., Chicago, 2012 INTERESTS: Banking; corporate finance; private equity and entrepreneurial activity.



Dong Beom Choi



Linda Goldberg



Matthew Plosser

JOÃO SANTOS

Ph.D., Boston University, 1995 INTERESTS: Corporate finance; banking; banking regulation and the design of financial systems, institutions, and contracts.

JAMES VICKERY

Ph.D., MIT, 2004 INTERESTS: Banking and financial institutions; mortgage markets and real estate finance; household finance; corporate finance.

RECENT PUBLICATIONS AND PAPERS

GARA AFONSO

"Trade Dynamics in the Market for Federal Funds," with Ricardo Lagos. *Econometrica* 83, no. 1 [2015].

"The Over-the-Counter Theory of the Fed Funds Market: A Primer," with Ricardo Lagos. *Journal of Money, Credit, and Banking* 47, supplement 2 (2015).

NICOLA CETORELLI

"Banking Globalization and Monetary Transmission," with Linda Goldberg. *Journal of Finance* 67, no. 5 (2012).

"Surviving Credit Market Competition," *Economic Inquiry* 52, no. 1 (2014).

DONG BEOM CHOI

"Heterogeneity and Stability: Bolster the Strong, Not the Weak." *Review of Financial Studies* 27, no. 6 (2014).

"Sooner or Later: Timing of Monetary Policy with Heterogeneous Risk Taking." *American Economic Review: Papers and Proceedings* 106, no. 5 (2016).

LINDA GOLDBERG

"Cross-Border Prudential Policy Spillovers: How Much? How Important? Evidence from the International Banking Research Network," with Claudia Buch. International Journal of Central Banking 13, supplement 1 [2017].

PAUL GOLDSMITH-PINKHAM

"Consumer Bankruptcy and Financial Health," with Will Dobbie and Crystal Yang. Review of Economics and Statistics, forthcoming.

SEAN HUNDTOFTE

"Does Going Easy on Distressed Banks Help Economic Growth?" Federal Reserve Bank of New York *Staff Reports*, no. 823 (2017).

ANNA KOVNER

"How Do Global Banks Scramble for Liquidity? Evidence from the Asset-Backed Commercial Paper Freeze of 2007," with Viral V. Acharya and Gara Afonso. Journal of Financial Intermediation 30 (2017).

DONALD MORGAN

"The Benefits of Geographic Diversification in Banking," with Céline Meslier, Katherine Samolyk, and Amine Tarazi. Journal of International Money and Finance 69 (2016).

MATTHEW PLOSSER

"Buyout Activity: The Impact of Aggregate Discount Rates," with Valentin Haddad and Erik Loualiche. *Journal of Finance* 72, no. 1 (2017).

"The Federal Reserve and Market Confidence," Federal Reserve Bank of New York Staff Reports, no. 773 (2016).

JOÃO SANTOS

"Liquidity Risk and Maturity Management over the Credit Cycle," with Atif Mian. Journal of Financial Economics, forthcoming.

"Monetary Policy and Bank Risk-Taking: Evidence from the Corporate Loan Market," with Teodora Paligorova. Journal of Financial Intermediation 30 (2017).

JAMES VICKERY

"How Does Risk Management Influence Production Decisions? Evidence from a Field Experiment," with Shawn Cole and Xavier Giné. *Review of Financial Studies* 30, no. 6 (2017).

"Securitization and the Fixed-Rate Mortgage" with Andreas Fuster. *Review of Financial Studies* 28, no. 1 (2015).

International Research

The International Research Function conducts research and policy analysis on international economics, examining issues in open-economy macroeconomics, global finance, and trade. Staff research is published in academic journals and Federal Reserve publications and is designed to contribute to the Bank's overall perspective on international issues.

RECENT RESEARCH TOPICS INCLUDE:

 macroeconomic spillovers and policy interdependence,

financial integration,

- European and Japanese economic issues, and
- commodity prices.capital mobility and





Ozqe Akinci

Jan Groen

INTERNATIONAL RESEARCH STAFF

OZGE AKINCI

Ph.D., Columbia, 2012 INTERESTS: Open-economy macroeconomics; financial crises; macroprudential policies.

JAN GROEN

Ph.D., Erasmus University Rotterdam, 2000 INTERESTS: International finance; applied econometrics; macroeconomics; financial economics.

MATTHEW HIGGINS

Ph.D., Harvard, 1994 INTERESTS: International economics; trade; commodity prices; capital flows; demographics.

THOMAS KLITGAARD

Ph.D., Stanford, 1985 INTERESTS: European and Japanese economic issues; capital flows; international trade; exchange rates.

PAOLO PESENTI Ph.D., Yale, 1991 INTERESTS: Global macroeconomic adjustment; financial and currency crises.



Matthew Higgins



Thomas Klitgaard



Paolo Pesenti

RECENT PUBLICATIONS AND PAPERS

OZGE AKINCI

"How Effective Are Macroprudential Policies? An Empirical Investigation," with Jane Olmstead-Rumsey. Journal of Financial Intermediation, forthcoming.

JAN GROEN

"Revisiting Useful Approaches to Data-Rich Macroeconomic Forecasting," with George Kapetanios. Computational Statistics and Data Analysis 100 (2016).

MATTHEW HIGGINS and PAOLO PESENTI

"Policies and Institutions for Managing the Aggregate Macroeconomic Stance of the Eurozone," with Giancarlo Corsetti. In Richard Baldwin and Francesco Giavazzi, eds., How to Fix Europe's Monetary Union: Views of Leading Economists. London: CEPR Press (2016).

THOMAS KLITGAARD

"The Balance of Payments Crisis in the Euro Area Periphery," with Matthew Higgins. Federal Reserve Bank of New York *Current Issues in Economics and Finance* 20, no. 2 (2014).

Macroeconomic and Monetary Studies

Economists in the Macroeconomic and Monetary Studies Function conduct scholarly research on macroeconomics and monetary economics for publication in academic journals. They also provide rigorous analysis of current economic, fiscal, and monetary conditions and advise senior Bank management on monetary policy.

RECENT RESEARCH TOPICS INCLUDE

- forecasting and policy analysis using Bayesian VARs and DSGE models,
- nowcasting using large macroeconomic data sets,
- secular drivers of the natural rate of interest,
- the Federal Reserve's balance sheet risk,
- monetary policy and inequality,
- hysteresis and monetary policy,
- safe asset shortages and fiscal policy,
- wage dynamics over the business cycle,
- firm-to-firm relationships and price rigidity,

- international spillovers and policy coordination at the zero lower bound.
- evidence on the housing and mortgage boom from loan-level data,
- labor market churn, job and worker flows, and trends in labor force participation,
- firm heterogeneity and aggregate employment fluctuations,
- duration dependence, long-term unemployment, and firm hiring,
- demographics and firm dynamics, and
- assortative matching and income inequality.



Sushant Acharya

Marco Del Negro

MACROECONOMIC AND MONETARY STUDIES STAFF

SUSHANT ACHARYA Ph.D., Maryland, 2013 INTERESTS: Macroeconomics; monetary economics; information frictions in macroeconomics and learning.

MARCO DEL NEGRO

Ph.D., Yale, 1998 INTERESTS: Macroeconomics; time series econometrics; DSGE models.

KESHAV DOGRA Ph.D., Columbia, 2015 INTERESTS: Macroeconomics; monetary economics; fiscal policy.

DOMENICO GIANNONE

Ph.D., Université Libre de Bruxelles, 2004 INTERESTS: Forecasting; monetary policy; business cycles.

SEBASTIAN HEISE Ph.D., Yale, 2016 INTERESTS: Macroeconomics; international trade.

JONATHAN MCCARTHY

Ph.D., Wisconsin, 1992 INTERESTS: Macroeconomics; inventories; investment; housing; consumption.

RICHARD PEACH

Ph.D., Maryland, 1983 INTERESTS: Housing and real estate finance; federal fiscal policy.

LAURA PILOSSOPH

Ph.D., Chicago, 2013 INTERESTS: Macroeconomics; applied macroeconomics; labor economics.

ROBERT RICH

Ph.D., Brown, 1988 INTERESTS: Macroeconomics; time series econometrics.

AYŞEGÜL ŞAHIN

Ph.D., University of Rochester, 2002

INTERESTS: Macroeconomics; labor economics.



Domenico Giannone



Laura Pilossoph



Ayşegül Şahin



Argia Sbordone

ARGIA SBORDONE

Ph.D., Chicago, 1993 INTERESTS: Macroeconomics; monetary economics; inflation dynamics.

ANDREA TAMBALOTTI

Ph.D., Princeton, 2004 INTERESTS: Macroeconomics; monetary economics.

RECENT PUBLICATIONS AND PAPERS

SUSHANT ACHARYA

"Costly Information, Planning Complementarities, and the Phillips Curve." *Journal of Money, Credit, and Banking* 49, no. 4 (2017).

MARCO DEL NEGRO

"The Great Escape? A Quantitative Evaluation of the Fed's Liquidity Facilities," with Gauti Eggertsson, Andrea Ferrero, and Nobuhiro Kiyotaki. American Economic Review 107, no. 3 (2017).

"Dynamic Prediction Pools: An Investigation of Financial Frictions and Forecasting Performance," with Raiden B. Hasegawa and Frank Schorfheide. Journal of Applied Econometrics 192, no. 2 (2016).

KESHAV DOGRA

"Consumption Volatility, Liquidity Constraints, and Household Welfare," with Olga Gorbachev. *Economic Journal* 126, no. 597 (2016).

DOMENICO GIANNONE

"Exploiting the Monthly Data Flow in Structural Forecasting," with Francesca Monti and Lucrezia Reichlin. Journal of Monetary Economics 84 (2016).

SEBASTIAN HEISE

"Firm-to-Firm Relationships and Price Rigidity: Theory and Evidence." Unpublished paper, Yale University, 2016.

JONATHAN MCCARTHY

"Has the Response of Investment to Financial Market Signals Changed?" In Per Gunnar Berglund and Leanne J. Ussher, eds., *Recent Developments in Macroeconomics.* Eastern Economic Association conference volume.

RICHARD PEACH

"The Parts Are More Than the Whole: Separating Goods and Services to Predict Core Inflation." Federal Reserve Bank of New York Current Issues in Economics and Finance 19, no. 7 (2013).

LAURA PILOSSOPH

"Statistical Discrimination and Duration Dependence in the Job-Finding Rate," with Gregor Jarosch. Unpublished paper, September 2016.

ROBERT RICH

"The Measurement and Behavior of Uncertainty: Evidence from the ECB Survey of Professional Forecasters," with Joshua Abel, Joseph Song, and Joseph Tracy. Journal of Applied Econometrics 31, no. 3 (2016).

AYŞEGÜL ŞAHIN

"Gross Worker Flows over the Business Cycle," with Per Krusell, Toshihiko Mukoyama, and Richard Rogerson. *American Economic Review*, forthcoming.

"Job Search Behavior over the Business Cycle," with Toshihiko Mukoyama and Christina Patterson. *American Economic Journal: Macroeconomics*, forthcoming.

ARGIA SBORDONE

"Optimized Taylor Rules for Disinflation When Agents Are Learning," with Timothy Cogley and Christian Matthes. Journal of Monetary Economics 72 (2015).

ANDREA TAMBALOTTI

"Safety, Liquidity, and the Natural Rate of Interest," with Marco Del Negro, Domenico Giannone, and Marc P. Giannoni. Brookings Papers on Economic Activity, forthcoming.

Microeconomic Studies

The Microeconomic Studies Function contributes to the Bank's monetary and financial policy missions through the construction and analysis of a wide array of micro data sets and the application of relevant microeconomic theory and state-of-the-art econometric techniques. In addition, staff conduct long-term research in applied microeconomic topics, including labor economics, public finance, consumer finance, housing, urban economics, and health economics.

RECENT RESEARCH TOPICS INCLUDE:

- analysis of household balance sheets and consumer credit,
- student loans,
- survey measurement of household inflation expectations,
- subjective expectations formation, updating, and links to economic behavior,
- skill and locational mismatch in the labor market,
- vacancy posting behavior of firms,
- subjective beliefs and educational choices,

- personal bankruptcy,
- analysis of macroeconomic and labor market impacts of health policy, including the Affordable Care Act,
- design and comparison of belief elicitation techniques,
- spatial and temporal variation in vacant-land prices,
- selection and income distribution dynamics, and
- simulated maximumlikelihood estimation for discrete choice models.





Mary Amiti

Olivier Armantier

MICROECONOMIC STUDIES STAFF

MARY AMITI

Ph.D., London School of Economics and Political Science, 1997 INTERESTS: Trade finance; trade liberalization and productivity, wages, the wage skill premium, and product quality; exchange rate pass-through.

OLIVIER ARMANTIER

Ph.D., University of Pittsburgh, 1999 INTERESTS: Industrial organization; econometrics; experimental economics; applied microeconomics; game theory.

RAJASHRI CHAKRABARTI

Ph.D., Cornell, 2004 INTERESTS: Public economics and public policy; labor economics and the economics of education; applied microeconomics; applied econometrics.

STEFANO EUSEPI

Ph.D., University of Warwick, 2004 INTERESTS: Macroeconomics; monetary economics: poplinear

economics; nonlinear dynamics.

ANDREW HAUGHWOUT

Ph.D., Pennsylvania, 1993 INTERESTS: Household finance; public finance; housing; urban and regional economics.

FATIH KARAHAN

Ph.D., Pennsylvania, 2012 INTERESTS: Business cycles; consumption and savings; housing; labor economics.

GIZEM KOSAR

Ph.D., Johns Hopkins, 2015 INTERESTS: Labor economics; public economics; household finance.

DONGHOON LEE

Ph.D., Pennsylvania, 2001 INTERESTS: Housing economics; household finance; labor economics.

MAXIM PINKOVSKIY

Ph.D., MIT, 2013 INTERESTS: Public economics; health economics; applied microeconomics; economic growth and development; econometrics.



Andrew Haughwout



Gizem Kosar



Maxim Pinkovskiy

GIORGIO TOPA

Ph.D., Chicago, 1996 INTERESTS: Labor and urban economics; consumer and business expectations; social interactions and local spillovers; spatial econometrics.

WILBERT VAN DER KLAAUW

Ph.D., Brown, 1992 INTERESTS: Labor economics; public policy; household finance; applied econometrics.

RECENT PUBLICATIONS AND PAPERS

MARY AMITI

"How Much Do Idiosyncratic Bank Shocks Affect Investment? Evidence from Matched Bank-Firm Loan Data," with David E. Weinstein. Journal of Political Economy, forthcoming.

"Importers, Exporters, and Exchange Rate Disconnect," with Oleg Itskhoki and Jozef Konings. American Economic Review 104, no. 7 [2014].

OLIVIER ARMANTIER

"Discount Window Stigma during the 2007-2008 Financial Crisis," with Eric Ghysels, Asani Sarkar, and Jeffrey Shrader. Journal of Financial Economics 118, no. 2 [2015].

"The Rich Domain of Risk," with Nicolas Treich. *Management Science* 62, no. 7 (2016).

RAJASHRI CHAKRABARTI

"Do Charter Schools Crowd Out Private School Enrollment? Evidence from Michigan," with Joydeep Roy. Journal of Urban Economics 91 (2016).

STEFANO EUSEPI

"Central Bank Communication and Expectations Stabilization," with Bruce Preston. American Economic Journal: Macroeconomics 2, no. 3 (2010). "Expectations, Learning, and Business Cycle Fluctuations," with Bruce Preston. American Economic Review 101, no. 6 [2011].

ANDREW HAUGHWOUT

"Second Chances: Subprime Mortgage Modification and Re-Default," with Ebiere Okah and Joseph Tracy. *Journal of Money, Credit, and Banking* 48, no. 4 (2016).

FATIH KARAHAN

"The Role of Startups in Structural Transformation," with Robert Dent, Benjamin Pugsley, and Ayşegül Şahin. American Economic Review: Papers and Proceedings 106, no. 5 (2016).

GIZEM KOSAR

"Trends in Cumulative Marginal Tax Rates Facing Low-Income Families, 1997-2007." In Robert A. Moffitt, ed., *Tax Policy and the Economy*, vol. 31. Chicago: University of Chicago Press (2017).

DONGHOON LEE

"Simulated Maximum Likelihood Estimation for Discrete Choices Using Transformed Simulated Frequencies," with Kyungchul Song. Journal of Econometrics 187, no. 1 (2015).

MAXIM PINKOVSKIY

"Lights, Camera, ... Income! Illuminating the National Accounts-Household Surveys Debate," with Xavier Salai-Martin. Quarterly Journal of Economics 131, no. 2 [2016].

"Growth Discontinuities at Borders," *Journal of Economic Growth* 22, no. 2 (2017).

GIORGIO TOPA

"Working Hard in the Wrong Place: A Mismatch-Based Explanation to the U.K. Productivity Puzzle," with Christina Patterson, Ayşegül Şahin, and Giovanni L. Violante. *European Economic Review* 84 (2016).

WILBERT VAN DER KLAAUW

"Financial Education and the Debt Behavior of the Young," with Meta Brown, John Grigsby, Jaya Wen, and Basit Zafar. *Review of Financial Studies* 29, no. 9 (2016).

"Workers' Spending Response to the 2011 Payroll Tax Cuts," with Grant Graziani and Basit Zafar. American Economic Journal: Economic Policy 8, no. 4 (2016).

Money and Payments Studies

The Money and Payments Studies Function focuses its research on the infrastructures that allow our financial system to operate—such as payment and settlement arrangements—and the institutions that operate them—such as clearinghouses. Important elements of study are the money markets (including the federal funds market, the Eurodollar markets, and the repo market), especially their interbank and interdealer segments. Economists explore the markets' institutional details and their role in affecting funding and market liquidity, financial stability, and the design of optimal micro- and macroprudential policies.





Thomas Eisenbach

Gabriele La Spada

MONEY AND PAYMENTS STUDIES STAFF

MARCO CIPRIANI

Ph.D., NYU, 2002 INTERESTS: Financial economics; market microstructure; money and banking; experimental economics.

ADAM COPELAND

Ph.D., University of Minnesota, 2002 INTERESTS: Industrial organization; financial intermediation; market microstructure.

THOMAS EISENBACH

Ph.D., Princeton, 2011 INTERESTS: Financial economics; microeconomic theory; behavioral economics.

KENNETH GARBADE

Ph.D., Princeton, 1975 INTERESTS: U.S. Treasury securities; risk management; relative value analysis.

GABRIELE LA SPADA

Ph.D., Princeton, 2015 INTERESTS: Financial economics; financial econometrics.

MICHAEL LEE Ph.D., Wharton, 2016 INTERESTS: Corporate finance; financial markets; financial institutions.

RECENT RESEARCH TOPICS INCLUDE:

- analyzing activity in short-term funding markets under normal conditions and during periods of market stress,
- preparing recommendations for international oversight of the setting of standards for financial rates and indexes,
- evaluating the implementation of monetary policy with very large levels of reserves in the banking system and its effect on money markets,
- studying short-term funding markets for financial institutions, including the repo

market and the unsecured money markets (Eurodollar and federal funds market),

- understanding the dynamics of credit spreads,
- studying the impact of new regulation, such as the impact of Basel III

regulation on banks and the effect of SEC reforms of money market mutual funds on financial markets, and

 studying vulnerabilities of the financial system to runs and fire sales and how these vulnerabilities change over time.



Michael Lee



Antoine Martin



Asani Sarkar

ANTOINE MARTIN

Ph.D., University of Minnesota, 2001 INTERESTS: Financial intermediation; payment economics; money and banking.

ASANI SARKAR

Ph.D., Pennsylvania, 1989 INTERESTS: Market microstructure; financial crises and lender-of-last-resort.

RECENT PUBLICATIONS AND PAPERS

MARCO CIPRIANI

"Information Contagion in the Laboratory," with Antonio Guarino, Giovanni Guazzarotti, Federico Tagliati, and Sven Fischer. *Review of Finance*, forthcoming.

ADAM COPELAND

"Price Setting in an Innovative Market," with Adam Shapiro. *Review of Economics and Statistics* 98, no. 3 (2016).

THOMAS EISENBACH

"Rollover Risk as Market Discipline: A Two-Sided Inefficiency." Journal of Financial Economics, forthcoming.

"Anxiety in the Face of Risk," with Martin Schmalz, *Journal* of Financial Economics 121, no. 2 (2016).

KENNETH GARBADE

Treasury Debt Management under the Rubric of Regular and Predictable Issuance: 1983-2012, New York: Federal Reserve Bank of New York (2015).

GABRIELE LA SPADA

"Competition, Reach for Yield, and Money Market Funds." Journal of Financial Economics, forthcoming.

MICHAEL LEE

"Uncertain Booms and Fragility." Unpublished paper, University of Pennsylvania, Wharton School of Business, 2016.

ANTOINE MARTIN

"Bank Lending in Times of Large Bank Reserves," with James McAndrews and David Skeie. International Journal of Central Banking 12, no. 4 [2016].

ASANI SARKAR

Dealer Financial Conditions and Lender-of-Last-Resort Facilities," with Viral Acharya, Michael Fleming, and Warren B. Hrung. Journal of Financial Economics 123, no. 1 (2017).

"Discount Window Stigma during the 2007-2008 Financial Crisis," with Olivier Armantier, Eric Ghysels, and Jeffrey Shrader. Journal of Financial Economics 118, no. 2 (2015).

Regional Analysis

The Regional Analysis Function engages in research on issues of interest to the Second Federal Reserve District in support of the Bank's monetary policy and outreach objectives. The Function also analyzes and monitors economic developments in the region and shares the information obtained with stakeholders in the Bank and throughout the District.

RECENT RESEARCH TOPICS INCLUDE:

- human capital and local economic development,
- the microfoundations of urban agglomeration economies,
- regional wage inequality,
- skill upgrading in the manufacturing sector,
- the geography of the housing boom and bust,
- the relationship between home prices and rents in New York City,

- the economics of natural disasters,
- the competitiveness of Puerto Rico's economy, and
- the labor market for recent college graduates after the Great Recession.





Jason Bram

REGIONAL ANALYSIS STAFF

JAISON ABEL Ph.D., Ohio State, 1999 INTERESTS: Industrial organization; economics of innovation; public finance; urban and regional economics.

JASON BRAM

M.B.A., NYU, 1992 INTERESTS: Regional economics; survey research; consumer confidence; housing markets; consumer behavior.



Richard Deitz

RICHARD DEITZ Ph.D., Binghamton University, 1995 INTERESTS: Regional economics; urban economics; labor economics; public finance; household finance.

RECENT PUBLICATIONS AND PAPERS

JAISON ABEL

"Underemployment in the Early Careers of College Graduates following the Great Recession," with Richard Deitz. Education, Skills, and Technical Change: Implications for Future U.S. GDP Growth. NBER-CRIW conference volume. Chicago: University of Chicago Press, forthcoming.

JASON BRAM

"To Buy or Not to Buy? The Changing Relationship between Manhattan Rents and Home Prices." Federal Reserve Bank of New York *Current Issues in Economics and Finance* 18, no. 9 (2012).

RICHARD DEITZ

"Agglomeration and Job Matching among College Graduates," with Jason Abel. Regional Science and Urban Economics 51 (2015).

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A blog that enables our economists to engage with the public on important issues quickly and frequently.

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THE ECONOMIC POLICY REVIEW

A policy-oriented journal focusing on economic and financial market issues. https://www.newyorkfed.org/research/epr/index.html

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Technical working papers intended for publication in leading economic and finance journals. https://www.newyorkfed.org/research/staff_reports/index.html

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