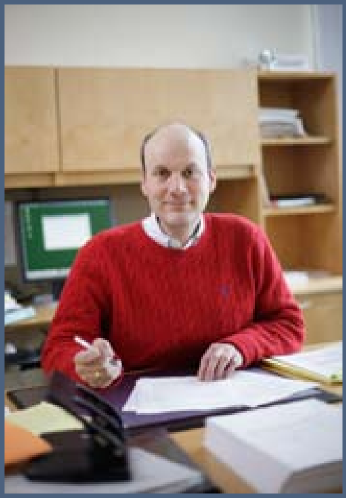
RESEARCH THAT MAKES A DIFFERENCE



Working as an Economist at the Federal Reserve Bank of Boston

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This brochure is intended to give a complete overview of the advantages an economist can expect to gain by joining the Research Department at the Federal Reserve Bank of Boston.

A Career at the Boston Fed Offers Many Advantages to Research Economists

- Ample time for self-directed research. During the first year here, you will be able to devote 100 percent of your time to writing journal articles for publication.

- The Research Department has a collegial group of economists who value interaction, collaboration, and rigorous scholarship.

- The opportunity to influence policymaking and make policy presentations to the Bank's President and Board of Directors.

- The Boston Fed's close proximity to Boston College, Boston University, Brandeis University, Harvard University, the Massachusetts Institute of Technology, and the National Bureau of Economic Research, among other local institutions, offers ample opportunities for enriching our in-house seminar series as well as opportunities to teach and attend seminars at nearby universities.

- Abundant research support from research assistants, access to extensive computer resources and numerous databases, research librarians, research editors, administrative assistants, and dedicated computer staff.

- Travel support to attend seminars and conferences in the United States and abroad.

Three Accomplished Economists Comprise the Bank's Research Leadership

Eric Rosengren, President and Chief Executive Officer

- 2006. (with Patrick de Fontnouvelle, Virginia DeJesus-Rueff, and John Jordan). "Capital and Risk: New Evidence on Implications of Large Operational Losses." *Journal of Money, Credit, & Banking* 38 (October): 1819–1846.
- 2000. (with Joe Peek). "Collateral Damage: Effects of the Japanese Bank Crisis on Real Activity in the United States." *The American Economic Review* 90 (March): 30–45.
- 1997. (with Joe Peek). "The International Transmission of Financial Shocks: The Case of Japan." *The American Economic Review* 87 (September): 495–505.

Jeff Fuhrer, Executive Vice President and Director of Research

- (with Geoff Tootell). 2008. "Eyes on the Prize: How Did the Fed Respond to the Stock Market?" *Journal of Monetary Economics* 55 (May): 796–805.
- 2000. "Habit Formation in Consumption and Its Implications for Monetary Policy Models." *The American Economic Review* 90 (June): 367–390.
- (with George R. Moore). 1995. "Monetary Policy Trade-Offs and the Correlation Between Nominal Interest Rates and Real Output." *American Economic Review* 85 (March): 219–239.

Geoff Tootell, Senior Vice President and Deputy Director of Research

- 1999. (with Joe Peek and Eric Rosengren). "Is Bank Supervision Central to Central Banking." *Quarterly Journal of Economics* 114(2): 629–653.
- 1999. "Whose Monetary Policy Is It Anyway?" *Journal of Monetary Economics* 43 (February): 217–235.
- 1996. (with Alicia H. Munnell, Lynn E. Browne, and James McEneaney). "Mortgage Lending In Boston: Reinterpreting the HMDA Data." *American Economic Review* 86 (March): 25–53.

Research Department Journal Publication Record

	ALL YEARS OF CAREER		LAST 10 YEARS	
	Tier 1 Journals	Total Journals	Tier 1 Journals	Total Journals
Rosengren, Fuhrer, and Tootell	30	60	17	26
Other Research Economists	11	76	9	46
Total	**41**	**136**	**26**	**72**

For the purposes of this analysis, Tier 1 journals are: *The American Economic Review, Econometrica, Journal of Economic Theory, Journal of Finance, Journal of Monetary Economics, Journal of Political Economy, and The Quarterly Journal of Economics.*

Eric S. Rosengren, President and Chief Executive Officer

The Federal Reserve Bank of Boston has provided a wonderful opportunity for me to pursue a passion for doing good empirically oriented academic work, while also working on projects that can truly alter policy debates.

I have always been interested in the intersection of finance and macroeconomics, and had the good fortune of arriving at the Boston Fed's Research Department as a newly minted Ph.D. economist shortly before the New England credit crunch began in the late 1980s. As banking problems emerged first in New England and then elsewhere in the country, I had the opportunity to work on projects that allowed me the time not only to empirically investigate the impact of banking problems, but also to talk to borrowers and bankers to get a better understanding of the institutional impediments that are not always obvious from looking at the data. Not only did that work provide a series of academic publications, but it also provided an opportunity to write Congressional testimony and work with senior policymakers inside and outside of the Federal Reserve. Over time I worked on projects ranging from Japanese banking problems, to quantifying operational risk, to understanding the current financial turmoil. In 2000 I became the head of the Bank's Department of Supervision, Regulation, and Credit, and in this capacity I gained some international regulatory experience related to the Basel II Capital Accord.

In all of my various positions at the Boston Fed, I have had the time and resources to pursue writing academic articles while also having the ability to influence future policy decisions. Few jobs can provide both an opportunity and resources to do important academic work while also providing the ability to change public policy. The Federal Reserve Bank of Boston has a great set of economists working on important projects that influence both academic and policy debates. That is the reason that I have found working here so rewarding. Few jobs can provide both an opportunity and resources to do important academic work while also providing the ability to change public policy.

“Few jobs can provide both an opportunity and resources to do important academic work while also providing the ability to change public policy.”

Selected Excerpts
December 17, 2008
"In Hub, a Vital Voice on Policy"
By Robert Gavin
Boston Globe

Flash back to a year ago. The US economy was slowing, but employers were still adding jobs. The Dow Jones Industrial average remained above 13,000. Oil prices were taking off. And policy makers at the Federal Reserve agreed that only a modest cut in interest rates was needed to keep the economy on track.

All but one. Eric Rosengren, little more than four months into his tenure as president of the Boston Federal Reserve Bank, made the lone call for more aggressive action to offset the impact of turbulent financial markets, plunging home prices, and an emerging credit crunch. His colleagues, he argued, were underestimating the threat to the broader economy.

That dissent now looks prescient, with a deep recession underway and the Fed yesterday slashing its benchmark interest rate almost to zero, trying to revive the economy. It also thrust Rosengren into the spotlight and signaled the reemergence of the Boston Fed as a prominent player not only in New England, but on the national economic scene.

* * *

"The way you influence Fed policy is through your arguments, and he's been very influential," said Ethan Harris, cochief US economist at Barclays Capital in New York and author of *Ben Bernanke's Fed,* about the Federal Reserve under chairman Ben Bernanke. "Rosengren was one of the guys who caught on very early to the dimensions of the credit crunch, and he's been right."

* * *

"There's very few people who know as much about the business of banking as Eric," said Anil Kashyap, a professor at the University of Chicago's Booth School of Business."

Representative Publications by Economists in the Research Department

Michelle Barnes

2006. "Alternative Measures of the Federal Reserve Banks' Cost of Equity Capital," with Jose A. Lopez. *The Journal of Banking and Finance* 30(6), 1687–1711.

1999. "Inflation and Asset Returns," with John H. Boyd and Bruce D. Smith. *European Economic Review* 43(4–6), 737–754.

Kathy Bradbury

Forthcoming. "Designing State Aid Formulas: The Case of a New Formula for Distributing Municipal Aid in Massachusetts," with Bo Zhao. *Journal of Public Policy Analysis and Management*.

1998. "School Quality and Massachusetts Enrollment Shifts in the Context of Tax Limitations," with Karl E. Case and Christopher J. Mayer. *New England Economic Review* (July/August), 3–18.

Mary Burke

2007. "Social Dynamics of Obesity," with Frank Heiland. *Economic Inquiry* 45(July): 571–591.

2002. "An Evolutionary Model of Debt," with Kislaya Prasad. *Journal of Monetary Economics* 49 (October): 1407–1438.

Chris Foote

2008. "Negative Equity and Foreclosure: Theory and Evidence," with Kristopher Gerardi and Paul S.Willen. *Journal of Urban Economics* 64 (September): 234–245.

2008. "The Impact of Legalized Abortion on Crime: Comment," with Christopher F. Goetz. *Quarterly Journal of Economics* 123 (February): 407–423.

Lorenz Goette

2007. "Do Workers Work More When Wages Are High? Evidence from a Randomized Field Experiment," with Ernst Fehr. *American Economic Review* 97(March): 298–317.

2007. "How Wages Change: Micro Evidence from the International Wage Flexibility Project," with Bill Dickens, Erica Groshen, Steinar Holden, Julian Messina, Mark Schweitzer, Jarkko Turunen, and Melanie Ward-Warmedinger. *Journal of Economic Perspectives* 21(Spring):195–214.

Giovanni Olivei

2008. "Capital Account Liberalization, Financial Depth, and Economic Growth," with Michael Klein. *Journal of International Money and Finance* 27 (October): 861–875.

2007. "The Timing of Monetary Policy Shocks," with Silvana Tenreyro. *American Economic Review* 97 (June): 636–663.

Scott Schuh

2008. "Productivity and U.S. Macroeconomic Performance: Interpreting the Past and Predicting the Future with a Two-Sector Real Business Cycle Model," with Peter N. Ireland. *Review of Economic Dynamics* 11 (July): 473-492.

1996. *Job Creation and Destruction*, with Steven J. Davis and John C. Haltiwanger. Cambridge, MA: The MIT Press.

Joanna Stavins

2004. "Network Externalities and Technology Adoption: Lessons from Electronic Payments, with Gautam Gowrisankaran. *RAND Journal of Economics* 35 (Summer): 260–276.

2001. "Price Discrimination in the Airline Market: The Effect of Market Concentration.*The Review of Economics and Statistics* 83 (February): 200–202.

Paul S. Willen

2007. "Social Security and Unsecured Debt," with Erik Hurst. *Journal of Public Economics* 91 (August): 1273–1297.

2006. "Borrowing Costs and the Demand for Equity over the Life Cycle," with Steven J. Davis and Felix Kubler. *The Review of Economics and Statistic*, 88 (May):348–362.

THE SUBPRIME MORTGAGE CRISIS

Paul S. Willen, Senior Economist and Policy Advisor

In March 2007 Cathy E. Minehan, the Bank's now former president, asked economists in the Research Department why the foreclosure rate in New England was rising so rapidly. Besides myself, Chris Foote and Lorenz Goette worked on this, as well as Kristopher Gerardi and Adam Shapiro (two senior research associates who were then completing their Ph.D.s at Boston University and are now economists employed at the Atlanta Fed and the Bureau of Economic Analysis, respectively). As our investigation deepened, we eventually assembled a collection of datasets that covered, in varying degrees, every borrower and every mortgage issued in Massachusetts since January 1987, including purchase mortgages, refinance mortgages, home equity loans, and purchase deeds. This state-level data was supplemented by data on other states in New England and elsewhere, some obtained through the Board of Governors, that allowed us to identify whether the mortgage was considered subprime, Alt-A, or prime, in many cases to identify the individual borrower's FICO score and debt-to-income ratio, and most importantly, to trace the ownership outcomes. The Massachusetts data covers one complete housing cycle in the late 1980s and the early 1990s, a period when subprime mortgages were rare, and also captures the peak of the current housing cycle that is now unwinding.

Out of this research has come a related set of working papers that focus on subprime mortgages and the subprime crisis, and the relationship between negative equity and foreclosure. Some of these working papers have gone on to be published in the *Journal of Urban Economics* and the *Journal of Housing Economics* or are forthcoming articles in the *BE Journal of Economic Analysis and Policy*, the *Brookings Papers on Economic Activity*, and the *NBER Macroeconomics Annual 2009*. A policy initiative that in part derived from this work was a foreclosure prevention workshop held at Gillette Stadium in August 2008; more foreclosure workshops are scheduled for early 2009. The Research Department is also conducting a phone survey of Massachusetts borrowers at risk of foreclosure in an effort to better understand the current housing crisis. While some of the results only pertain to Massachusetts, we believe that many of the implications of our findings apply broadly to the rest of the housing market in the United States.

We showed that falling prices were central to the problem, a fact that is accepted now but was not when we first made our case in late 2007. We showed that investors, for the most part, understood how risky subprime mortgages were and understood that a fall in prices would lead to severe losses but failed to anticipate the fall in house prices that started in 2006.

Our main achievement has been to document some basic facts about the crisis, many of which flatly contradict the conventional wisdom. We showed that resets of adjustable rate mortgages were not the cause of most foreclosures. We showed that falling prices were central to the problem, a fact that is accepted now but was not when we first made our case in late 2007. We showed that investors, for the most part, understood how risky subprime mortgages were and understood that a fall in prices would lead to severe losses but failed to anticipate the fall in house prices that started in 2006. And we showed that only a small fraction of borrowers who have negative equity, meaning those who own homes worth less than the outstanding mortgage balance, eventually default.

FORECLOSURE PREVENTION WORKSHOP FOR STRUGGLING HOMEOWNERS

Marques Benton, Assistant Vice President for Public and Community Affairs

Subprime mortgage lending, falling home prices, and mounting foreclosures are at the heart of the nation's economic crisis and $700 billion rescue plan. Foreclosure prevention workshops, like the one we coordinated at Gillette Stadium and held in August 2008, are important activities designed to help troubled households and this nation's economy recover more quickly and resume normal functioning. Specifically, the Gillette event helped 2,176 troubled borrowers connect with loan servicers and foreclosure prevention counselors to address their mortgage problems.

Collaborating with the Research Department on this important initiative proved invaluable. Not only did Research conduct a comprehensive survey of 400 attendees to evaluate the event's effectiveness, they also rolled up their sleeves on numerous operational challenges to help make the event happen. Going forward, we plan to do more Gillette-like events and I know Research will be right there helping us make a difference in households, communities, and the economy.

THE RESEARCH CENTER FOR BEHAVIORAL ECONOMICS AND DECISIONMAKING

Chris Foote, Senior Economist and Policy Advisor;
Acting Director of the Research Center for Behavioral Economics and Decisionmaking

The Boston Fed's Research Center on Behavioral Economics and Decisionmaking was founded in 2005 to explore the intersection of behavioral economics and economic policy. It houses two full-time economists who are members of the Research Department, as well as occasional visiting scholars. Like other Boston Fed researchers, economists at the Center spend much of their time writing papers for publication in academic journals. In recent papers, these economists have explored the causes and consequences of wage rigidity, the impact of group membership on co-operation and norm enforcement,and the effects of incentives on prosocial behavior.

The Center is also an integral part of the Boston Fed's policy process. Researchers at the Center are now conducting a telephone survey among financially troubled New England homeowners to learn how mortgage choices are related to individual levels of financial literacy and cognitive skills. In another recent project done in conjunction with Marques Benton and the Department of Community and Public Affairs, researchers at the Center estimated the time-preference parameters of low-to-moderate income volunteer subjects, then linked these estimates to debt and default data from the subjects' credit reports. These projects will probably also generate academic publications, but these are already shedding light on policy issues of great importance to the Federal Reserve System.

The Boston Fed's Research-Directed Policy Approach

At the Boston Fed we have a unique way of doing policy research. We meet informally to discuss what we should present to our Bank's president Eric Rosengren, in order to best influence the debate about what course monetary policy should take. At these meetings, the most pressing and effective ideas rise to the top, and new ideas are often forged during the meeting through collegial interaction. Our policy work can be sole- or team-authored, depending on the overlap of interest among economists. Each economist chooses the topics to work on and when to work on these. Our informal departmental meetings are followed by meetings with Eric, which occur before each of the eight FOMC meetings that take place every year. Our goal for these meetings is to prepare Eric for the debate at the FOMC table. In fact, during these meetings our discussion is like an FOMC meeting itself, as Eric asks for our views about how we think monetary policy should evolve and why.

The policy research that we conduct ranges over a wide array of topics. Recent examples include the linkages between the financial and real sectors, the changing behavior of house prices and their role in the evolving macroeconomic outlook, and changes in inflation dynamics, just to name a few. Of course the latter has been quite important, because changes in the degree of inflation persistence, the "anchoring" of inflation expectations, or the sensitivity of inflation to marginal cost can bear important implications for the conduct of monetary policy.

Finally, our policy research is unique in that our standard is that the research should be more than a synthesis or survey of existing work. Our policy work constitutes original research that sheds new light on a topic that is relevant for the policy debate. In this sense, each policy memo is a short independent and original research piece, often expandable to an academic research paper. Economists who contribute to policy in this way find a lot of synergy between their policy research and academic research work.

The Pre-FOMC Visiting Scholars Program

A novel feature of the Boston Fed's Research Department is a recently inaugurated program that aims to take advantage of the district's peerless academic resources and to enhance the Bank's monetary policy contributions to the Federal Open Market Committee. The Boston Fed aims to be one of the most effective and respected participants in these discussions, particularly during this time of unprecedented economic challenges facing our country and the global macroeconomy.

We have six senior-level Economic Advisors visit the Bank one day a week, and strive to have them come in on the same day. Currently these are Laurence Ball (Johns Hopkins University), Susanto Basu (Boston College), Fabio Ghironi (Boston College), Gita Gopinth (Harvard University), Matteo Iacoviello (Boston College), and Catherine Mann (Brandeis University).

We also plan to add four junior-level Visitors, such as advanced Ph.D. students, to come on this same day. The Bank will sponsor a regular seminar/discussion in which the Economic Advisors, Bank economists, and Eric Rosengren will participate. The work presented will be relevant to monetary policy deliberations, including internal memoranda as well as draft papers aimed at refereed journals. In some instances, Advisors will attend the Research Department's internal "pre-FOMC" meeting to vet issues for presentation to the Bank's President and Board of Directors.

New England Study Group

The New England Study Group (NESG) is a seminar series, held from September to June, hosted by the Federal Reserve Bank of Boston's Research Department. The seminars cover topics that are related to the New England economy and are presented by researchers from universities and other organizations. People from both the Boston Fed and outside local organizations are welcome to attend the seminars.

Academic Advisory Council

The Boston Fed's Academic Advisory Council is drawn from economists teaching at the local and regional universities, many of whom are among the top scholars in their particular fields. A few times a year, the Research Department has a half-day long meeting with the Council, which provides the Boston Fed's economists a chance to interact with these professors and present their work for discussion.

Current Academic Advisory Council Members

Robert J. Barro	Harvard University
Olivier J. Blanchard	Massachusetts Institute of Technology
William C. Brainard	Yale University
Erik Brynjolfsson	Massachusetts Institute of Technology
Karl E. Case	Wellesley College
Richard N. Cooper	Harvard University
James S. Duesenberry	Harvard University
Ray C. Fair	Yale University
Martin Feldstein	Harvard University/NBER
Jeffrey Frankel	Harvard University
Barbara Fraumeni	University of Southern Maine
Benjamin Friedman	Harvard University
Peter Ireland	Boston College
Edward Kane	Boston College
Lawrence Katz	Harvard University
Lisa M. Lynch	Brandeis University
Robert King	Boston University
N. Gregory Mankiw	Harvard University
Catherine L. Mann	Brandeis University
Rachel McCulloch	Brandeis University
James Poterba	Massachusetts Institute of Technology/NBER
Paul A. Samuelson	Massachusetts Institute of Technology
Robert Solow	Massachusetts Institute of Technology
James Stock	Harvard University

Boston's Academic Amenities

As touched on earlier, Boston has a wealth of academic amenities located in a very concentrated geographic area. The Massachusetts Institute of Technology is a short 10 minute subway ride on the T from the Boston Fed, while another 5 minutes and two stops on the Red Line brings you to Harvard University and the National Bureau of Economic Research. Boston University is about 20 minutes away, while Brandeis University and Tufts University are a bit further away. Brown University is about an hour's drive from Boston. Boston Fed economists often attend conferences and weekly seminars held at these universities, which together with the NBER routinely draw visiting economists from throughout the United States, Canada, and elsewhere. Boston is a short shuttle flight or Amtrak trip to New York City and Washington DC.

The wealth of universities in the Boston area means that economists working at the Federal Reserve Bank of Boston have opportunities to teach at these schools. A list of the Boston Fed economists who have taught at universities while employed here follows:

Economists from area institutions also regularly serve as visiting scholars in the Boston Fed's Research Department.

Boston Fed Economists Who Have Taught at Local Universities

Economist	Local Institution	Time by Subway
Chris Foote	Massachusetts Institute of Technology	10 Minutes
Chris Foote	Harvard University	15 Minutes
Lorenz Goette	Massachusetts Institute of Technology	10 Minutes
Jane Little	Simmons College	30 Minutes
Scott Schuh	Boston College	60 Minutes
Robert Triest	Massachusetts Institute of Technology	10 Minutes
Robert Triest	Harvard Kennedy School of Government	15 Minutes
Paul Willen	Massachusetts Institute of Technology	10 Minutes

Economists from area institutions also regularly serve as visiting scholars in the Boston Fed's Research Department.

Some Local Economists Who Have Been Visiting Scholars at the Boston Fed

Visiting Scholars	Local Institution
Susanto Basu	Boston College
Ben Bernanke	Princeton University
Olivier J. Blanchard	Massachusetts Institute of Technology
Ricardo J. Caballero	Massachusetts Institute of Technology
Karl E. Case	Wellesley College
Jordi Galí	University of Pompeu Fabra
Francesco Giavazzi	Bocconi University
Simon Gilchrist	Boston University
Peter Ireland	Boston College
Julio J. Rotemberg	Harvard Business School

THE CONSUMER PAYMENTS RESEARCH CENTER

Joanna Stavins, Senior Economist and Policy Advisor

When I started at the Federal Reserve Bank of Boston in 1995, I came with a background in industrial organization, and had studied market structure in a variety of market settings. I soon realized that payment methods constitute another market—households and businesses make decisions on how to pay based on maximizing their utility or profit, just like in other sectors of the economy. My initial work focused on the supply side of payments, but there are lots of interesting questions on the demand side, especially those involved with trying to understand why consumers choose certain payment methods.

Consumer payment behavior has significant implications for consumption and savings. In particular, when consumers decide to borrow on their credit cards, they alter their budget constraints. This has implications for macroeconomics, as credit card borrowing changes with economic cycles, something we are witnessing right now in late 2008. Researchers have been trying to understand consumer credit card behavior for quite some time, and the standard neoclassical models have not worked very well. In addition to the modeling issues, there are no good sources of reliable data on consumer payment behavior. In order to understand payment behavior and substitution among payment methods, high-quality data on consumer payment use are crucial. To improve this information, I have worked on developing new, more representative surveys of the way U.S. consumers use payment methods. The Boston Fed sponsored a national survey on consumer payment behavior administered by the RAND Corporation. We are planning to repeat the survey annually to start the first longitudinal source of data on payment use. Gaining a better sense of how consumers make payment decisions will help the Federal Reserve System and the private sector better predict future changes in payment use and consumption. In 2007 the Boston Fed launched a research program on consumer finance with Peter Tufano from the Harvard Business School and John Campbell from the Harvard Economics Department. The program's scope is much broader than payments, and the group includes researchers from around New England who work on household saving and borrowing, housing, retirement, and financial literacy, among many other topics.

Consumer payment behavior has significant implications for consumption and savings. Yet there are no good sources of reliable data on consumer payment behavior. In order to understand payment behavior and substitution among payment methods, high-quality data on consumer payment use are crucial. To improve this information, I have worked on developing new, more representative surveys of the way U.S. consumers use payment methods. The Boston Fed sponsored a national survey on consumer payment behavior administered by the RAND Corporation. We are planning to repeat the survey annually to start the first longitudinal source of data on payment use. Gaining a better sense of how consumers make payment decisions will help the Federal Reserve System and the private sector better predict future changes in payment use and consumption.

Geoff Tootell, Senior Vice President and Deputy Director of Research

During my time at the Boston Fed, where I have spent my entire career as an economist, many of my academic publications have come out of research conducted while trying to resolve policy debates. Some of this research has actually incited policy debates or intensified existing ones. A review of two research programs illustrates these experiences.

The first involved work on the Home Mortgage Disclosure Act (HMDA), enacted by Congress in 1975 and implemented by the Federal Reserve Board's Regulation C. This provision collects public loan data to determine whether financial institutions are serving their communities' housing needs and to identify whether there is possible discrimination present in mortgage lending patterns. Yet any work using the original HMDA data suffered from severe omitted variable bias; the original HMDA also collected data only on accepted loans, thus ignoring demand when trying to sort out lending issues. To overcome the limits of the HMDA data, the Federal Reserve Bank of Boston asked mortgage lenders operating in the Boston Metropolitan Statistical Area (MSA) to supply additional data that would better capture rejections and better gauge what might be the underlying determinants of the lending decision. We collected information on each applicant's loan-to-value, credit histories, and the rest of the data in the loan file for a random sample of 3,300 applications made by whites and all the applications made by African Americans and Hispanics. The omitted variables accounted for some of the unexplained gap in denial rates between whites and African Americans and Hispanics, but the results still left an unexplained gap of about 50 percent between minority and white applicants. These results suggested that among borrowers with the same personal and property characteristics, white applicants enjoyed a general presumption of creditworthiness not extended to African American and Hispanic applicants. This jointly authored study was published in the *AER* (1996) and I published a related *QJE* article (1996) on possible mortgage redlining in the Boston MSA. One policy outcome from this work is that HMDA changed the information it requested from financial institutions, and regulators were better able to do their jobs.

The second research example of the spillover between policy and research centered on whether the Fed's partial responsibility for bank supervision, regulation, and credit (SRC) yields data that help it conduct monetary policy. In the 1990s this was a policy question in many OECD nations–for instance, the Bank of England was given greater independence in mid-1997, but its bank supervisory role was removed. While on the commuter train with Eric Rosengren, an argument broke out over whether it was possible to prove that the SRC function helps the Fed fulfill its monetary policy responsibilities. The argument was "settled" in a study coauthored with Joe Peek, published in the *QJE* (1999); it presents robust evidence that supervisory data can improve the performance of monetary policy. We three published a related paper in the *JME* (2003) arguing that the informational advantage gained from the Fed's access to confidential supervisory data persists long enough to be exploited by activist monetary policy. Our methodology showed both the statistical significance and the economic importance of this information.

“Here at the Boston Fed, policy work looks like research, unlike teaching duties or directed staff work elsewhere. Policy work at the Boston Fed is largely self-directed; we won’t dictate projects to you, but rather will ask what you think are important contemporary policy issues, and what you think should be done.”

Which is rather a long-winded way of saying that here at the Boston Fed, policy work looks like research, unlike teaching duties or directed staff work elsewhere. Policy work at the Boston Fed is largely self-directed; we won't dictate projects to you, but rather will ask what you think are the important contemporary policy issues, and what you think should be done about them. We'll ask you to assemble the econometric evidence to prove your point, and if done well, this will result in journal-quality work, which you can choose to publish anywhere you like.

Life Inside and Outside the Research Department

When you join the Boston Fed as an economist in the Research Department, your sole responsibility during your first year here will be to conduct research on topics of your own choosing. Over the next two to four years, depending largely on your inclination, you will gradually add policy-related research support to your responsibilities. After three to five years, you will reach what we call "steady state," when your time is roughly divided 50-50 between conducting your own research and providing policy research. As stressed throughout this brochure, we believe the synergies between research and policy work are significant, and that policymaking support often broadens and reinforces your own research programs. In addition to participating in the pre-FOMC meetings, you may be asked to brief the Bank's Board of Directors on a topic of current interest, give a presentation to the Bank's Academic Advisory Council, participate in a special study for the Federal Reserve System, write and deliver a talk to a business group or other organization within the Bank's First District or elsewhere, or participate in the Bank's community and public education outreach programs.

We have a department seminar series one day most weeks that usually features an outside scholar. We also have a more informal brown bag seminar that often features department members presenting work-in-progress, though sometimes this features outside speakers too.

While the Research Department encourages external publication in peer-reviewed journals, the Department offers a number of venues for posting your work in print and web format. These forums include our working paper series (see www.bos.frb.org/economic/wp/index.htm) and our public policy discussion paper series (see www.bos.frb.org/economic/ppdp/index.htm). A policy presentation made to our Board of Directors or President may be posted in our series of public policy briefs (see www.bos.frb.org/economic/ppb/index.htm). These three series serve to invite scholarly comment before your work is submitted to academic journals. All research conducted in the department, whether published in an academic journal or posted on our web site, is referenced or summarized in *Research Review,* our print and online digest of work produced in the department.

The Boston Fed's Research Department prides itself on maintaining a collegial, nonhierarchical culture. We keep the environment open and innovative to encourage interaction, and we want people feel confident about trying new ideas and approaches. There is no division between newly minted and well-seasoned economists—everyone's work is equally valued, an ethos that extends to the rest of the Department's staff. You will have first-rate support from our research assistants, most of whom are recent college graduates who spend a couple years here before going on for an advanced degree. As a first-year economist, you will have a minimum of a half-time research assistant, and more can be arranged if needed.

Our computing facilities are outstanding (PC, Unix, and mainframe) and you will have access to all the standard econometric software, including Eviews, Gauss, Matlab, RATS, SAS, Stata, and TSP. The Department has four dedicated computer support specialists. Macroeconomic databases include Global Insight, Haver Analytics, and the Board of Governor's comprehensive FAME database. Microeconomic databases include bank call reports, Compustat, CPS, CRSP, PSID, and the Census Bureau's Boston Regional Data Center. In addition, you will have access to all the Federal Reserve System databases, Bloomberg, Thomson Financial, and special or one-time data purchases are possible.

Our Research Library has electronic journals access through EconLit, Elsevier Science, JSTOR, the NBER, and other venues. Online news and financial data services include Bloomberg, Bridge, Dow Jones, Factiva, and Reuters. Interlibrary loan services are available, and you will have easy access to the extensive local university and Boston public libraries. We can order books and materials that you might need. The library is staffed by professionals with many years of experience, and they are available to assist you. As you are developing, writing, and publishing you work, our two full-time editors can help you prepare your research for internal and external publication.

As an organization, the Federal Reserve Bank of Boston puts a great deal of emphasis on providing a work-life balance, and the Research Department is particularly supportive of flexible work schedules, including working remotely. Many economists telecommute from home one day a week, and extended work from different locations, including foreign countries, is supported.

A Selected List of Distinguished Research Department Alumni

Mark Aguiar	University of Rochester
Lorenz Goette	University of Geneva
Borja Larrain	Pontificia Universidad Catolica de Chile
Stephan Meier	Columbia University
Christoper J. Meyer	Columbia University
Joe Peek	University of Kentucky
Silvana Tenreyro	London School of Economics

International Connections: Visiting There and Visitors Here

The Research Department supports travel abroad to conferences and seminars.

Besides hosting foreign economists as visiting scholars who may be teaching at local universities, the Boston Fed's Research Department has a Central Bank Visiting Scholars Program, which it plans to expand in the future.

Recent Central Bank Visiting Scholars

Visiting Scholars	Central Bank
Juri Marcucci	Bank of Italy
Jumana Salaheen	Bank of England
Fredrik Wulfsberg	Bank of Norway

Labor Force Participation Rates

Kathy Bradbury, Senior Economist and Policy Advisor

In 2005, several economists in the Research Department examined various questions regarding the unemployment rate as a measure of labor market slack. In the winter and spring, I investigated whether trends and cyclical patterns in labor force participation rates might be distorting the relationship between unemployment and slack. Labor force participation rates typically soften or decline in recessions and then recover along with the economy, but almost 4 years after the business cycle peak of March 2001, labor force participation rates for all groups—except men and women aged 55 years and older— had not recovered to the degree typical in earlier business cycles. These lower-than-average participation rates represented potential slack in the U.S. labor market. The material on this topic that I developed for a March 16, 2005 pre-FOMC memo was also presented to the Boston Fed's Academic Advisory Council in April and posted as public policy brief 05-2, "Additional Slack in the Economy: The Poor Recovery in Labor Force Participation in This Business Cycle." On the basis of this labor force participation research, I was asked to write an entry on "unemployment measurement" for The New Palgrave Dictionary of Economics, second edition, which was published in 2008. The entry can be viewed online at http://www.dictionaryofeconomics.com/article?id=pde2008_U000074.

Later in 2005, economists Michelle Barnes and Giovanni Olivei, together with their research assistants, took a more quantitative approach to this topic, preparing a memo for the September 14, 2005 pre-FOMC meeting on "Labor Market Slack and Implications for Inflation." The memo presented a principal components analysis of 11 labor market indicators and compared its performance with "the usual" unemployment rate gap. This memo was later updated and posted in late 2007 as public policy brief 07-2, "A Principal Components Approach to Estimating Labor Market Pressure and Its Implications for Inflation."

Selected Excerpt
July 18, 2005
"The Dropout Puzzle"
By Paul Krugman
New York Times

Economists who argue that there's something wrong with the unemployment numbers are buzzing about a new study by Katharine Bradbury, an economist at the Federal Reserve Bank of Boston, which suggests that millions of Americans who should be in the labor force aren't. "The addition of these hypothetical participants," she writes, "would raise the unemployment rate by one to three-plus percentage points."

Some background: the unemployment rate is only one of several numbers economists use to assess the jobs picture. When the economy is generating an abundance of jobs, economists expect to see strong growth in the payrolls reported by employers and in the number of people who say they have jobs, together with a rise in the length of the average workweek. They also expect to see wage gains well in excess of inflation, as employers compete to attract workers.

In fact, we see none of these things. As Berkeley's J. Bradford DeLong writes on his influential economics blog, "We have four of five indicators telling us that the state of the job market is not that good and only one - the unemployment rate - reading green."

Those with a downbeat view of the jobs picture argue that the low reported unemployment rate is a statistical illusion, that there are millions of Americans who would be looking for jobs if more jobs were available. Those with an upbeat view argue that labor force participation has fallen for reasons that have nothing to do with job availability - for example, young adults, recognizing the importance of education, may have chosen to stay in school longer.

That's where Dr. Bradbury's study comes in. She shows that the upbeat view doesn't hold up in the face of a careful examination of the numbers. In fact, because older Americans, especially older women, are more likely to work than in the past, labor force participation should have risen, not fallen, over the past four years. As a result, she suggests that there may be "considerable slack in the U.S. labor market": there are at least 1.6 million and possibly as many as 5.1 million people who aren't counted as unemployed but would take jobs if they were available.

Jeff Fuhrer, Executive Vice President and Director of Research

My career as a research economist began at the Board of Governors in 1985. Just about all of my work has been motivated by real-world policy concerns, and I have always tried to address these issues using appropriate, advanced research methods.

For instance, the Fuhrer-Moore model arose from the Board's desire in the 1980s to replace the use of monetary aggregates as policy guides. One of our early papers (*JME* 1992) examined employing asset prices—commodity prices, the real exchange rate, the slope of the term structure—as guides for policy. In this paper, we explored a simple policy rule in which the policy rate responded to inflation, thus requiring a model for inflation. We discovered that the simple Calvo price-setting model produced rapid and near-costless disinflations, and this result prompted our research into forward-looking models that better conformed to the data. That research program continues today. Our subsequent papers examined structural explanations for the reduced-form relationship between the funds rate and real activity (*AER* 1995, QJE 1996), and attempted to develop more data-consistent models of consumption and the output gap (*AER* 2000). Most of my published work was completed after I joined the Boston Fed in 1992. I have found the environment here extremely conducive to producing high-quality academic work.

These examples highlight a critical aspect of the research environment here at the Boston Fed. While I have had offers to work in very fine scholarly environments, I have never found a place that can match the Federal Reserve for overall intellectual stimulation. The interplay between real-time policy concerns and long-term basic research has been ideal. There has never been a shortage of challenging issues to research, and current circumstances suggest that feature is here to stay for quite a while.

Finally, I would add that the Fed offers something our academic competitors cannot: a chance to make a real difference in public policy. Never has this connection been more clearly demonstrated than in recent months, as the Fed has designed new liquidity facilities, grappled with the tradeoffs between saving "systemically important" institutions and creating moral hazard, and attempted to get an early read on the deteriorating economy so as to implement appropriate monetary policy. The Boston Fed has played a key role in these efforts, operating a $150 billion liquidity facility for money market mutual funds, and consistently leading the pack in detecting incipient economic weakness.

Our theme throughout this brochure is "research that makes a difference," and the department atmosphere does make a difference to the economists' research, as the material in this document shows. For talented researchers who want to make policy contributions along with conducting academically oriented research, the Boston Fed is a great place to work. It certainly has been for me!

"I have never found a place that can match the Federal Reserve for overall intellectual stimulation. The interplay between real-time policy concerns and long-term basic research has been ideal. There has never been a shortage of challenging issues to research, and current circumstances suggest that feature is here to stay for quite a while."

Department-Sponsored Activities

Annual June Conferences	Year
After the Fall: Re-evaluating Supervision, Regulation, and Central Bank Policy	2009
Understanding Inflation and the Implications for Monetary Policy: A Phillips Curve Retrospective	2008
Labor Supply in the New Century	2007
Global Imbalances and the Evolving World Economy	2006
Wanting It All: The Challenge of Reforming the U.S. Health Care System	2005
Behavioral Center	
Implications of Behavioral Economics for Economic Policy	2007
NBER Macroeconomics and Individual Decision Making Conference	2006
The Future of Life-Cycle Saving & Investing	2006, 2008
How Humans Behave: Implications for Economics and Economic Policy	2003
Consumer Payments Research Center (former Emerging Payments Research Group)	
Consumer Behavior and Payment Choice Research Conference	2005, 2006, 2008
Consumer Finance Research Group (joint with Harvard)	Semiannual
New England Public Policy Center Conferences	
Financing Municipalities in New England: Revisiting the State-Local Relationship	2007
Covering the Uninsured: Costs, Benefits, and Policy Alternatives for New England	2006
Fueling the Future: Energy Policy in New England	2005
Nurse-to-Patient Ratios: Research and Reality	2005
Others:	
Foreclosure Prevention Workshop for Struggling Homeowners	2008, 2009
4th Annual Dynare Conference	2008
The Future of Life-Cycle Saving & Investing	2006
(With Boston University and the Research Foundation of CFA Institute)	

The Future of Life-Cycle Saving & Investing 2008
(With Boston University and the Research Foundation of CFA Institute)

Recent Departmental Seminars Weekly

Forced Sales and House Prices November 2008
John Y. Campbell, Stefano Giglio, and Parag Pathak, Harvard University

The Financial Crisis and Consumer Confidence November 2008
Richard Curtin, University of Michigan Survey of Consumers

A Model of Indivisible Commodity Money with Minting and Melting October 2008
Warren Weber, Federal Reserve Bank of Minneapolis

Changes in Housing Wealth and Consumption: October 2008
Did the Linkage Increase in the 2000s?
Mark Doms, Federal Reserve Bank of San Francisco

New England Study Group Monthly
Consequences of High School Exit Examinations for Struggling Low-Income Urban Students: September 2008
Evidence from Massachusetts
Richard J. Murnane, Harvard University (co-authored with John P. Papay and John B. Willett, Harvard University)

Forecasting House Prices for States and the Nation May 2008
Yolanda Kodrzycki, Bob Triest, Brendan Mackoff, and Ana Patricia Muñoz, Federal Reserve Bank of Boston

Connecting to Compete: Using High-Speed Intercity and Commuter Rail to Integrate the Innovation Capabilities April 2008
of the Northeast Corridor
Kip Bergstrom, Rhode Island Economic Development Corporation

Is New England Experiencing a "Brain Drain"? March 2008
Facts about Demographic Change and Young Professionals
Heather Brome, New England Public Policy Center, Federal Reserve Bank of Boston

Appendix: Selected Publications by Subdiscipline

Applied Microeconomics and Labor Markets

"Designing State Aid Formulas: The Case of a New Formula for Distributing Municipal Aid in Massachusetts," Katharine Bradbury and Bo Zhao. *Journal of Public Policy Analysis and Management* (forthcoming 2009).

"Making Sense of the Subprime Crisis," Kristopher Gerardi, Shane M. Sherland, Andreas Lehnert, and Paul S. Willen. *Brookings Papers on Economic Activity* (forthcoming 2009).

"Just the Facts: An Initial Analysis of Subprime's Role in the Housing Crisis," Christopher L. Foote, Kristopher Gerardi, Lorenz Goette, and Paul S. Willen. *Journal of Housing Economics* (2008).

"Negative Equity and Foreclosure: Theory and Evidence," Christopher L. Foote, Kristopher Gerardi, and Paul S. Willen. *Journal of Urban Economics* (2008).

"The Diffusion of a Medical Innovation: Is Success in the Stars?," Mary A. Burke, Gary Fournier, and Kislaya Prasad. *Southern Economic Journal* (2007).

"How Wages Change: Micro Evidence from the International Wage Flexibility Project" with William Dickens, Lorenz Goette, Erica Groshen, Steinar Holden, Julian Messina, Mark Schweitzer, Jarkko Turunen, and Melanie Ward-Warmedinger. *Journal of Economic Perspectives* (2007) .

"Social Multipliers," Mary A. Burke. In *The New Palgrave Dictionary of Economics*, second edition, ed. Steven N. Durlauf and Lawrence E. Blume. Palgrave-Macmillan (2007).

"Women's Rise—A Work in Progress: Are Professional Women Opting Out? Recent Evidence on College-Educaed Women's Labor Force Participation," Katharine Bradbury and Jane Katz. *Regional Review* 14 (2005).

Behavioral Economics

"Do Workers Work More When Wages Are High? Evidence from a Randomized Field Experiment," Ernst Fehr and Lorenz Goette. *American Economic Review* (2007).

"The Impact of Group Membership on Cooperation and Norm Enforcement: Evidence from Random Assignment to Real Social Groups," Lorenz Goette, David Huffman, and Stephan Meier. *American Economic Review* (2006).

Finance

"Borrowing Costs and the Demand for Equity Over the Life Cycle," Steven J. Davis, Felix Kubler, and Paul Willen. *The Review of Economics and Statistics* (2006).

"Threshold Relationships Among Inflation, Financial Market Development and Growth," Michelle Barnes and Nicolas Duquette. *Journal of Financial Transformation* (2006).

"New Financial Markets: Who Gains and Who Loses," Paul S. Willen. *Economic Theory* (2005).

International Economics

"Unnatural Selection: Perverse Incentives and the Misallocation of Credit in Japan," Joe Peek and Eric S. Rosengren. *The American Economic Review* (2005).

"Job Creation, Job Destruction, and the Real Exchange Rate," Michael Klein, Scott Schuh, and Robert K. Triest. *Journal of International Economics* (2003).

"Troubled Banks, Impaired Foreign Direct Investment: The Role of Relative Access to Credit," Michael Klein, Joe Peek, and Eric S. Rosengren. *The American Economic Review* (2002).

Macroeconomics and Monetary Policy

"Productivity and U.S. Macroeconomic Performance: Interpreting the Past and Predicting the Future with a Two-Sector Real Business Cycle Model," Peter N. Ireland and Scott Schuh. *Review of Economic Dynamics* (2008).

"The Timing of Monetary Policy Shocks," Giovanni Olivei and Silvana Tenreyro. *The American Economic Review* (2007).

"Intrinsic and Inherited Inflation Persistence," Jeffrey Fuhrer. *International Journal of Central Banking* (2006).

"The Robustness and Real Consequences of Downward Nominal Wage Rigidity," Ernst Fehr and Lorenz Goette. *Journal of Monetary Economics* (2005).

Estimating the Euler Equation for Output," Jeffrey Fuhrer and Glenn Rudebusch. *Journal of Monetary Economics* (2004).

"Does the Federal Reserve Possess An Exploitable Informational Advantage?," Joe Peek, Eric S. Rosengren, and Geoffrey M.B. Tootell. *Journal of Monetary Economics* (2003).

"Identifying the Macroeconomic Effect of Loan Supply Shocks," Joe Peek, Eric S. Rosengren, and Geoffrey M.B. Tootell. *Journal of Money, Credit, and Banking* (2003).

"Habit Formation in Consumption and Its Implications for Monetary Policy," Jeffrey Fuhrer. *The American Economic Review* (2000).

"Is Bank Supervision Central to Central Banking?" Joe Peek, Eric S. Rosengren, and Geoffrey M. B. Tootell. *The Quarterly Journal of Economics* (1999).

Payments and Banking

"Implications of Alternative Operational Risk Modeling Techniques," Patrick de Fontnouvelle, Eric S. Rosengren, and John S. Jordan. In *The Risks of Financial Institutions*, ed. Mark Carey and René M. Stulz (National Bureau of Economic Research Conference Report). The University of Chicago Press (2007).

"Capital and Risk: New Evidence on Implications of Large Operational Losses," 2006. Patrick de Fontnouvelle, Virginia DeJesus-Rueff, John Jordan, and Eric S. Rosengren. *Journal of Money, Credit, & Banking* (2006).

"Network Externalities and Technology Adoption: Lessons from Electronic Payments," Gautam Gowrisankaran and Joanna Stavins. *RAND Journal of Economics* (2004).

Public Finance

"Property Tax Limits, Local Fiscal Behavior, and Property Values," Katharine L. Bradbury, Karl E. Case, and Christopher J. Mayer. Journal of Public Economics (2001).

"Econometric Issues in Estimating the Behavioral Response to Taxation: A Non-Technical Introduction," Robert K. Triest. National Tax Journal (1998).

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