

# Research **UPDATE**

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Research and Statistics Group [www.newyorkfed.org/research](http://www.newyorkfed.org/research)

## *Liberty Street Economics* Blog Series Examines Jobs Picture

**N**ew York Fed economists recently published a string of consecutive posts on the topic of U.S. labor market conditions, producing the first themed series of the *Liberty Street Economics* blog. Ten writers teamed up to outline the issues affecting the jobs picture and update readers on their latest research in the field.

They set the stage with a puzzle that has been a focus of debate: What explains the surprisingly quick drop in the unemployment rate at a time of relatively modest GDP growth? Their investigation then moved on to consider the possible paths for the unemployment rate coming out of the recession.

At 8.3 percent in February, the unemployment rate was down 0.8 percentage point from mid-2011 and markedly below its peak of 10.1 percent in 2009. In the lead post, “Prospects for the U.S. Labor Market,” Jonathan McCarthy and Simon Potter note that the last drop of this size—in 1984—came with a 7 percent surge in real GDP growth, in contrast to growth today “around trend at best” (about 2.5 percent).

This anomaly led McCarthy, Potter, and Ging Cee Ng into a discussion in the second post about Okun’s law (“Okun’s Law and Long Expansions”)—which suggests a predictable relationship between GDP growth and unemployment—and when it has and has not held up. Continuing the series, Ayşegül Şahin and Christina Patterson, in “The Bathtub Model of Unemployment: The Importance of Labor Market Flow Dynamics,” and Stefania Albanesi, Şahin, and Joshua Abel, in “Reconciling Contrasting Signals in the Labor Market: The Role of Participation,” looked

at how the unemployment rate is influenced by demographics, labor force participation, and other factors. Among the patterns they discussed is the contrast between men’s steady decline in labor force participation in the postwar period and women’s swing from increasing to flattening and now declining participation.

The blog series also identified other key issues shaping recovery in the labor market, such as the “speed and smoothness” with which laid-off workers will be able to transition into new jobs. Şahin and Richard Crump, in their post “Skills Mismatch, Construction Workers, and the Labor Market,” reported on their research into the surprisingly strong job-finding abilities of construction workers. The economists observed that, although facing an unemployment rate of 16 percent, construction workers have lately been better able than displaced workers as a whole to find new work that fits their skills, and they have done so without making greater concessions than other workers.

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Economists and policymakers continue to debate the extent to which the U.S. jobs picture is afflicted by structural unemployment in the form of high levels of “skills mismatch,” which keeps displaced workers from attaining comparable jobs in other sectors. In 2011, New York Fed economists helped devise a “Mismatch Index”; drawing on that index for the labor market series, the blog authors argue that “although mismatch rose considerably during the Great Recession, that rise proved temporary.”

The final blog post in the series, “Conclusion: How Low Will the Unemployment Rate Go?” by McCarthy, Potter, and Şahin, covers the economists’ view of how far and fast the labor market might recover.

Keep watch for a second themed series coming soon on changes in banking since 1995.

#### The Labor Market Series:

- “*Prospects for the U.S. Labor Market*” by Jonathan McCarthy and Simon Potter
- “*Okun’s Law and Long Expansions*” by Jonathan McCarthy, Simon Potter, and Ging Cee Ng
- “*The Bathtub Model of Unemployment: The Importance of Labor Market Flow Dynamics*” by Ayşegül Şahin and Christina Patterson
- “*Reconciling Contrasting Signals in the Labor Market: The Role of Participation*” by Stefania Albanesi, Ayşegül Şahin, and Joshua Abel
- “*Skills Mismatch, Construction Workers, and the Labor Market*” by Richard Crump and Ayşegül Şahin
- “*Historical Echoes: How the BLS Measured Up*” by Amy Farber and Andrew Haughwout
- “*Conclusion: How Low Will the Unemployment Rate Go?*” by Jonathan McCarthy, Simon Potter, and Ayşegül Şahin

### Publications and Other Media

- *The Economic Policy Review*—a policy-oriented journal focusing on economic and financial market issues.
- *EPR Executive Summaries*—online versions of selected *Economic Policy Review* articles, in abridged form.
- *Current Issues in Economics and Finance*—concise studies of topical economic and financial issues.
- *Second District Highlights*—a regional supplement to *Current Issues*.
- *Staff Reports*—technical papers intended for publication in leading economic and finance journals, available only online.
- *Publications and Other Research*—an annual catalogue of our research output.
- *Liberty Street Economics*—a blog that enables our economists to engage with the public on important economic issues quickly and frequently.

## U.S. Firms Retain Competitiveness in Global Markets

The sharp drop in the U.S. share of world goods trade since 2000 stems from a variety of factors and does not signal a broad-based decline in U.S. firms' ability to compete against foreign exporters, according to a new article in *Current Issues in Economics and Finance* (vol. 18, no. 1, "Why Is the U.S. Share of World Merchandise Exports Shrinking?").

Author Benjamin R. Mandel begins his analysis by noting that the U.S. market share of world goods exports fell from roughly 12 percent in the 1980s and 1990s to only 8.5 percent in 2010. For many observers, he remarks, this decline is a sign that the productivity growth of U.S. exporting firms has not kept pace with that of foreign firms exporting similar goods. To investigate the factors behind the drop in export share—and in particular to examine how large a role the relative productivity of U.S. firms has played—Mandel analyzes a detailed international data set that breaks down world trade into several hundred products.

Mandel first explores whether changes in the composition of goods traded internationally might help to explain the decline in the U.S. export share. "If the rest of the world is increasingly trading goods that the United States does not produce," he argues, "the U.S. export share will fall—even if U.S. firms remain just as productive as their competitors in the goods that they do export." To test this possibility, Mandel identifies the products that have contributed the most to the declining U.S. export share. In each case, he then calculates the extent to which U.S. manufacturers of that product lost market share to foreign producers and the extent to which the product itself simply claimed a smaller fraction of world exports. Mandel finds that compositional effects do indeed account for a significant part of the decline in the U.S. export share. To be sure, the nation lost ground to its competitors in the export of some goods (such as

machinery and transportation products) whose share of world trade was expanding. However, the commodities sector, one of the primary drivers of the decline, contributed to export share losses largely through the declining weight of these goods in the world export basket.

Mandel next pursues the notion that the slower growth rate of the U.S. economy relative to that of its competitors may account for part of the decline in the export share. Noting that a large body of research has demonstrated a link between the size of a nation's economy and the size of its international trade flows, he conducts an empirical exercise in which he relates the nation's export market share to its share of world GDP, geographic factors (such as the distance between import and export markets), and relative productivity. Mandel's calculations show that a reduction in the U.S. share of global output accounts for fully half of the decline in the U.S. export share. After "subtracting" the effects of these GDP dynamics and geographic factors from his calculations, Mandel views the residual as capturing the effects of a change in U.S. relative productivity. By this measure, the effects have been very modest: "Flagging relative productivity may have played a role in export contraction in the early 2000s, but it does not emerge as a large factor in the decline of the U.S. share of merchandise exports over the longer term."

Overall, Mandel's study shows that GDP dynamics and the changing make-up of international exports account for much of the decline in the U.S. export share. Other factors—such as the outsourcing of production processes to other countries and a drop in commodity prices—are also seen as playing a role in the export losses. By contrast, the author finds only slight evidence for the notion that U.S. firms as a group are experiencing a sharp drop in relative productivity, or in their ability to compete with foreign exporters more generally. ■

## Top Blog Posts of Q1

Our *Liberty Street Economics* blog publishes on economic topics twice a week—more frequently when there’s a post on a newly released report or on a pressing topic.

Listed below are the top five posts in the first quarter.

- “Grading Student Loans,” by Meta Brown, Andrew Haughwout, Donghoon Lee, Maricar Mabutas, and Wilbert van der Klaauw, March 5 – 13,128 downloads

The authors examine the overall student loan debt market as of third-quarter 2011, giving particular attention to changes from the second to the third quarter and highlighting new findings by age group.

- “Forecasting with Internet Search Data,” by Rebecca Hellerstein and Menno Middeldorp, January 4 – 6,582 downloads

Hellerstein and Middeldorp show that Internet search counts can also predict some financial market data releases, as well as future price movements in some financial markets.

- “Why Mortgage Refinancing Is Not a Zero-Sum Game,” by Joseph Tracy and Joshua Wright, January 11 – 4,964 downloads

The authors explain how making refinancing “available on streamlined terms and with moderate fees to all prime conforming borrowers who are current on their payments” could help stabilize the housing market and support economic growth. They also explain why mortgage refinancing is not—as some argue—a zero-sum game in which the benefits to one group are exactly offset by the costs to another.

- “The Bathtub Model of Unemployment: The Importance of Labor Market Flow Dynamics,” by *Ayşegül Şahin and Christina Patterson*, March 28 – 3,536 downloads

Şahin and Patterson focus on the labor market flow dynamics in an economic recovery to help understand how the unemployment rate may evolve.

- “Prospects for the U.S. Labor Market,” by Jonathan McCarthy and Simon Potter, March 26 – 3,498 downloads

In this first post of the labor market series, the authors outline some of the themes examined in the series and provide a brief summary of the conclusions. They also develop a simple framework to place the unemployment rate in context with the rest of the labor market.

<http://libertystreeteconomics.newyorkfed.org>

### Follow Us on Twitter!

The Research Group has a Twitter feed, designed to offer the first word on news going on in the Group, such as:

- new publications and blog posts,
- updates on economists’ work and speaking engagements,
- postings of key indexes and data,
- media coverage of our work.

Follow us at [@NYFedResearch](https://twitter.com/NYFedResearch).

## Most Downloaded Publications

Listed below are the most sought-after Research Group articles and papers from the New York Fed's website and from the Bank's page on the Social Science Research Network site ([www.ssrn.com/link/FRB-New-York.html](http://www.ssrn.com/link/FRB-New-York.html)).

### New York Fed website, first-quarter 2012:

- "Why Are Banks Holding So Many Excess Reserves?" by Todd Keister and James McAndrews (*Staff Reports*, no. 380, July 2009) – 4,508 downloads
- "Understanding the Securitization of Subprime Mortgage Credit" by Adam B. Ashcraft and Til Schuermann (*Staff Reports*, no. 318, March 2008) – 4,401 downloads
- "Shadow Banking," by Zoltan Pozsar, Tobias Adrian, Adam Ashcraft, and Hayley Boesky (*Staff Reports*, no. 458, July 2010) – 2,955 downloads

### SSRN website, first-quarter 2012:

- "Understanding the Securitization of Subprime Mortgage Credit," by Adam B. Ashcraft and Til Schuermann (*Staff Reports*, no. 318, March 2008) – 370 downloads
- "Corporate Governance and Banks: What Have We Learned from the Financial Crisis?" by Hamid Mehran, Alan Morrison, and Joel Shapiro (*Staff Reports*, no. 502, June 2011) – 352 downloads
- "Determinants and Impact of Sovereign Credit Ratings," by Richard Cantor and Frank Packer (*Economic Policy Review*, vol. 2, no. 2, October 1996) – 345 downloads

For lists of the top-ten downloads, visit [www.newyorkfed.org/research/top\\_downloaded/topdownloads.html](http://www.newyorkfed.org/research/top_downloaded/topdownloads.html). ■

## Recently Published

Jaison Abel. 2012. "Specialized Knowledge and the Geographic Concentration of Occupations," with Todd Gabe. *Journal of Economic Geography* 12, no. 2 (March): 435-53.

Mary Amiti. 2012. "Trade, Firms, and Wages: Theory and Evidence," with Donald Davis. *Review of Economic Studies* 79, no. 1 (January): 1-36.

Andreas Fuster. 2012. "Investment Dynamics with Natural Expectations," with Benjamin Hebert and David Laibson. *International Journal of Central Banking* 8, suppl. 1 (January): 243-66.

James Vickery. 2012. "Microinsurance: A Case Study of the Indian Rainfall Index Insurance Market," with Xavier Giné, Lev Menand, and Robert Townsend. In Chetan Ghate, ed., *The Oxford Handbook of the Indian Economy*, 167-94. Oxford: Oxford University Press.

Tanju Yorulmazer. 2012. "Fire Sale FDI," with Viral Acharya and Hyun Song Shin. *Korean Economic Review* 27, no. 2 (winter): 163-202. ■

## Papers Presented

“Agglomeration and Job Matching among College Graduates,” Jaison Abel. Fifty-First Annual Meeting of the Southern Regional Science Association, Charlotte, North Carolina, March 23. With Richard Deitz.

“The Great Recession, Federal Stimulus, and New York/New Jersey Schools,” Rajashri Chakrabarti. Association for Education, Finance, and Policy conference, Boston, Massachusetts, March 15. With Elizabeth Setren and Sarah Sutherland.

“Incentives and Responses under ‘No Child Left Behind’: Credible Threats and the Role of Competition,” Rajashri Chakrabarti. Association for Education, Finance, and Policy conference, Boston, Massachusetts, March 15.

“Effect of Constraints on Tiebout Competition: Evidence from the Michigan School Finance Reform,” Rajashri Chakrabarti. Association for Education, Finance, and Policy conference, Boston, Massachusetts, March 16. With Joydeep Roy.

“Optimal Target Criteria for Stabilization Policy,” Marc Giannoni. Joint Lunch Seminar Series of the Center for Financial Studies, European Central Bank, and Deutsche Bundesbank, Frankfurt, Germany, February 29. With Michael Woodford. Also presented at a Swiss National Bank seminar, Zurich, Switzerland, March 1.

“Surges, Stops, Flight, and Retrenchment in Capital Flows,” Linda Goldberg. One Hundred Twenty-Fourth Annual Meeting of the American Economic Association, Chicago, Illinois, January 6.

“Are the Effects of Market News on Asset Prices and Exchange Rates Changing?” Linda Goldberg. One Hundred Twenty-Fourth Annual Meeting of the American Economic Association, Chicago, Illinois, January 7.

“U.S. Branches of Foreign Banks in the Great Recession: Diverse Internal and External Lending Responses,” Linda Goldberg. One Hundred Twenty-Fourth Annual Meeting of the American Economic Association, Chicago, Illinois, January 8.

“The International Roles of the Dollar,” Linda Goldberg. Bretton Woods Committee Conference on Future of the Dollar and the International Monetary System, New York City, February 23.

“Liquidity Management of U.S. Global Banks: Internal Capital Markets in the Great Recession,” Linda Goldberg. Globalization and Monetary Policy Institute Conference on Financial Frictions and Monetary Policy in an Open Economy, Federal Reserve Bank of Dallas, Dallas, Texas, March 17. With Nicola Cetorelli.

“Vulnerable Banks,” Linda Goldberg. NBER Spring International Finance and Macroeconomics Program Meeting, Cambridge, Massachusetts, March 9.

“Commodity Prices, Commodity Currencies, and Global Economic Conditions,” Jan Groen. Workshop on Commodity Prices and Monetary Policy, Central Bank of Chile, Santiago, Chile, January 10. With Paolo Pesenti.

“Bailouts and Financial Fragility,” Todd Keister. Indian Statistical Institute seminar, Delhi, India, January 13. Also presented at a Bank of Mexico seminar, Mexico City, Mexico, February 22, and the European Central Bank, Frankfurt, Germany, March 21.

“Varieties and the Transfer Problem,” Paolo Pesenti. Conference on Monetary Policy in a Global Setting: China and the United States, Tsinghua University, Beijing, China, March 27. With Giancarlo Corsetti and Philippe Martin.

“Anatomy of Welfare Reform Evaluation: Announcement and Implementation Effects,” Wilbert van der Klaauw. University of Rochester, Applied Economics Workshop. Rochester, New York, March 27. With Richard Blundell and Marco Francesconi.

“MBS Ratings and the Mortgage Credit Boom,” James Vickery. New York Area Real Estate Conference, Baruch College, New York City, February 3. With Adam Ashcraft and Paul Goldsmith-Pinkham.

“On the Design of Contingent Capital with Market Trigger,” Zhenyu Wang. University of Exeter Business School seminar, Exeter, England, March 13. With Suresh Sundaresan. ■

## New Titles in the *Staff Reports Series*

### Macroeconomics and Growth

*No. 535, January 2012*

#### **Optimal Target Criteria for Stabilization Policy**

Marc P. Giannoni and Michael Woodford

This paper considers a general class of nonlinear rational-expectations models in which policymakers seek to maximize an objective function that may be household expected utility. Giannoni and Woodford show how to derive a target criterion that is

- 1) consistent with the model's structural equations,
- 2) strong enough to imply a unique equilibrium, and
- 3) optimal, in the sense that a commitment to adjust the policy instrument at all dates so as to satisfy the target criterion maximizes the objective function. The proposed optimal target criterion is a linear equation that must be satisfied by the projected paths of certain economically relevant "target variables." While the projected path of the economy requires information about its current state, the target criterion itself can be stated without reference to a complete description of the state of the world. The authors illustrate the application of the method to a nonlinear DSGE model with staggered price setting, in which the objective of policy is to maximize household expected utility.

*No. 540, January 2012*

#### **Is Increased Price Flexibility Stabilizing? Redux**

Saroj Bhattarai, Gauti Eggertsson, and Raphael Schoenle

Bhattarai, Eggertsson, and Schoenle study the implications of increased price flexibility on aggregate output volatility in a dynamic stochastic general equilibrium (DSGE) model. First, using a simplified version of the model, they show analytically that the results depend on the shocks driving the economy and the systematic response of monetary policy to inflation: More flexible prices amplify the effect of demand shocks on output if interest rates do not respond strongly to inflation, while higher flexibility amplifies the effect of supply shocks on output if interest rates are very responsive to inflation. Next, they estimate a medium-scale DSGE model using post-WWII U.S. data and Bayesian methods and, conditional on the estimates of structural parameters and shocks, ask: Would the U.S. economy have been more or less stable had prices been more flexible than historically?

The authors' main finding is that increased price flexibility would have been destabilizing for output and employment.

*No. 541, January 2012*

#### **House Price Booms, Current Account Deficits, and Low Interest Rates**

Andrea Ferrero

One of the most striking features of the period before the Great Recession is the strong positive correlation between house price appreciation and current account deficits, not only in the United States but also in other countries that have subsequently experienced the highest degree of financial turmoil. A progressive relaxation of credit standards can rationalize this empirical observation. Lower collateral requirements facilitate access to external funding and drive up house prices. The current account turns negative because households borrow from the rest of the world. At the same time, however, the world real interest rate counterfactually increases. The two key ingredients that reconcile a demand-based explanation of house price booms and current account deficits with the evidence on real interest rates are nominal interest rates lower than the predictions of a standard monetary policy rule in leveraged economies and foreign exchange rate pegs in saving countries.

*No. 546, February 2012*

#### **Optimal Interest Rate Rules and Inflation Stabilization versus Price-Level Stabilization**

Marc P. Giannoni

This paper compares the properties of interest rate rules such as simple Taylor rules and rules that respond to price-level fluctuations—called Wicksellian rules—in a basic forward-looking model. By introducing appropriate history dependence in policy, Wicksellian rules perform better than optimal Taylor rules in terms of welfare and robustness to alternative shock processes, and they are less prone to equilibrium indeterminacy. A simple Wicksellian rule augmented with a high degree of interest rate inertia resembles a robustly optimal rule—that is, a monetary policy rule that implements the optimal plan and is also completely robust to the specification of exogenous shock processes.

*No. 547, February 2012*

### **Long-Term Debt Pricing and Monetary Policy Transmission under Imperfect Knowledge**

Stefano Eusepi, Marc Giannoni, and Bruce Preston

This paper explores the effects of monetary policy under imperfect knowledge and incomplete markets. In this environment, the expectations hypothesis of the yield curve need not hold, a situation called unanchored financial market expectations. Whether or not financial market expectations are anchored, the private sector's imperfect knowledge mitigates the efficacy of optimal monetary policy. Under anchored expectations, slow adjustment of interest rate beliefs limits scope to adjust current interest rate policy in response to evolving macroeconomic conditions. Imperfect knowledge represents an additional distortion confronting policy, leading to greater inflation and output volatility relative to rational expectations. Under unanchored expectations, current interest rate policy is divorced from interest rate expectations. This permits aggressive adjustment in current interest rate policy to stabilize inflation and output. However, unanchored expectations are shown to raise significantly the probability of encountering the zero lower bound constraint on nominal interest rates. The longer the average maturity structure of the public debt, the more severe is the constraint.

*No. 551, February 2012*

### **Deficits, Public Debt Dynamics, and Tax and Spending Multipliers**

Matthew Denes, Gauti B. Eggertsson, and Sophia Gilbukh

Cutting government spending on goods and services increases the budget deficit if the nominal interest rate is close to zero. This is the message of a simple but standard New Keynesian DSGE model calibrated with Bayesian methods. The cut in spending reduces output and thus—holding rates for labor and sales taxes constant—reduces revenues by even more than what is saved by the spending cut. Similarly, increasing sales taxes can increase the budget deficit rather than reduce it. Both results suggest limitations of “austerity measures” in low interest rate economies to cut budget deficits. Running budget deficits can by itself be either expansionary or contractionary for output, depending on how deficits interact with

expectations about the long run in the model. If deficits trigger expectations of i) lower long-run government spending, ii) higher long-run sales taxes, or iii) higher future inflation, they are expansionary. If deficits trigger expectations of higher long-run labor taxes or lower long-run productivity, they are contractionary.

## **International**

*No. 537, January 2012*

### **The Hitchhiker's Guide to Missing Import Price Changes and Pass-Through**

Etienne Gagnon, Benjamin R. Mandel, and Robert J. Vigfusson

A large body of empirical work has found that exchange rate movements have only modest effects on inflation. However, the response of an import price index to exchange rate movements may be underestimated because some import price changes are missed when constructing the index. Gagnon, Mandel, and Vigfusson investigate downward biases that arise when items experiencing a price change are especially likely to exit or to enter the index. They show that, in theoretical pricing models, entry and exit have different implications for the timing and size of these biases. Using Bureau of Labor Statistics microdata, the authors derive empirical bounds on the magnitude of these biases and construct alternative price indexes that are less subject to selection effects. Their analysis suggests that the biases induced by selective exits and entries do not materially alter the literature's view that pass-through to U.S. import prices is low over the short- to medium-term horizons that are most useful for both forecasting and differentiating among economic models.

*No. 542 January 2012*

### **Crime, House Prices, and Inequality: The Effect of UPPs in Rio**

Claudio Frischtak and Benjamin R. Mandel

Frischtak and Mandel use a recent policy experiment in Rio de Janeiro, the installation of permanent police stations in low-income communities (or *favelas*), to quantify the relationship between a reduction in crime and the change in the prices of nearby residential real estate. Using a novel data set of detailed property prices from an online classifieds website,



they find that the new police stations (called UPPs) had a substantial effect on the trajectory of property values and certain crime statistics since the beginning of the program in late 2008. The authors also find that the extent of *inequality* among residential prices decreased as a result of the policy. Both of these empirical observations are consistent with a dynamic model of property value in which historical crime rates have persistent effects on the price of real estate.

*No. 545 February 2012*

### **Follow the Money: Quantifying Domestic Effects of Foreign Bank Shocks in the Great Recession**

Nicola Cetorelli and Linda S. Goldberg

Foreign banks pulled significant funding from their U.S. branches during the Great Recession. Cetorelli and Goldberg estimate that the average-sized branch experienced a 12 percent net internal fund “withdrawal,” with the fund transfer disproportionately bigger for larger branches. This internal shock to the balance sheets of U.S. branches of foreign banks had sizable effects on their lending. On average, for each dollar of funds transferred internally to the parent, branches decreased lending supply by about forty to fifty cents. However, the extent of the lending effects was very different across branches, depending on their pre-crisis modes of operation in the United States.

## **Microeconomics**

*No. 536, January 2012*

### **Heterogeneous Inflation Expectations, Learning, and Market Outcomes**

Carlos Madeira and Basit Zafar

Using the panel component of the Michigan Survey of Consumers, Madeira and Zafar show that individuals, in particular women and ethnic minorities, are highly heterogeneous in their expectations of inflation. The authors estimate a model of inflation expectations based on learning from experience that also allows for heterogeneity in both private information and updating. Their model vastly outperforms existing models of inflation expectations in explaining the heterogeneity in the data. They find that women, ethnic minorities, and less-educated agents have a higher degree of heterogeneity in their private information, and are also slower to update their expectations. In addition, they show that personal

income forecasts are positively related to subjective inflation expectations. During the 2000s, consumers believe inflation to be more persistent in the short term, but temporary fluctuations in inflation have less effect on income and long-term inflation expectations. Finally, the authors find evidence that sticky expectations and the heterogeneity of new information received by consumers generate higher mark-ups and inflation.

*No. 538, January 2012*

### **Precarious Slopes? The Great Recession, Federal Stimulus, and New Jersey Schools**

Rajashri Chakrabarti and Sarah Sutherland

Chakrabarti and Sutherland exploit unique panel-data and trend-shift analysis to analyze how New Jersey school finances were affected during the Great Recession and the ARRA federal stimulus period. Their results show strong evidence of downward shifts in both revenue and expenditure following the recession. Federal stimulus seemed to have helped in 2010; however, both revenue and expenditure still declined. While total revenue declined, the various components of revenue did not witness symmetric changes. The infusion of funds with the federal stimulus occurred simultaneously with statistically and economically significant cuts in state and local financing, especially the former. The authors’ results also show a compositional shift in expenditures in favor of categories that are linked most closely to instruction, while several non-instruction categories, including transportation and utilities, declined. Heterogeneity analysis shows that high-poverty and urban districts sustained the largest falls in the post-recession era, with Abbott Districts specifically falling the furthest from prerecession trends.

*No. 543, January 2012*

### **The Price Is Right: Updating of Inflation Expectations in a Randomized Price Information Experiment**

Olivier Armantier, Scott Nelson, Giorgio Topa, Wilbert van der Klaauw, and Basit Zafar

This paper investigates how consumers form and update their inflation expectations using a unique “information” experiment embedded in a survey. The authors elicit respondents’ expectations for future inflation, then randomly provide a subset of

respondents with inflation-relevant information, and finally, re-elicite inflation expectations from all respondents. This design creates unique panel data that allow them to identify the effects of new information on respondents' inflation expectations. The authors find that respondents revise their inflation expectations in response to information, and do so meaningfully: revisions are proportional to the strength of the information signal, and inversely proportional to the precision of prior inflation expectations. They also find systematic differences in updating across demographic groups and by question wording, underscoring how different types of information may be more or less relevant for different groups, and how the observed impact of information may depend on methods used to elicit inflation expectations.

*No. 552, February 2012*

### **Workforce Skills across the Urban-Rural Hierarchy**

Jaison R. Abel, Todd M. Gabe, and Kevin Stolarick

This paper examines differences in the skill content of work throughout the United States, ranging from densely populated city centers to isolated and sparsely populated rural areas. To do so, the authors classify detailed geographic areas into categories along the entire urban-rural hierarchy. An occupation-based cluster analysis is then used to measure the types of skills available in the regional workforce, which allows for a broader measure of human capital than is captured by conventional measures. Abel, Gabe, and Stolarick find that the occupation clusters most prevalent in urban areas—scientists, engineers, and executives—are characterized by high levels of social and resource-management skills, as well as the ability to generate ideas and solve complex problems. By contrast, the occupation clusters that are most prevalent in rural areas—machinists, makers, and laborers—are among the lowest in terms of required skills. These differences in the skill content of work shed light on the pattern of earnings observed across the urban-rural hierarchy.

*No. 556, February 2012*

### **The Supply Side of the Housing Boom and Bust of the 2000s**

Andrew Haughwout, Richard W. Peach, John Sporn, and Joseph Tracy

Much has been written about the demand side of the boom and subsequent bust in housing construction and prices over the 2000s, in particular, the innovations in mortgage finance and the loosening of underwriting standards that greatly expanded the pool of potential homebuyers. In this paper, the authors take a closer look at developments on the supply side of the housing market. Following a short literature review, they begin with a descriptive review of housing production, sales, and prices at the national, regional, and state levels. They then look at developments in the homebuilding industry over this period. They also take a closer look at land markets using a quarterly price index for metropolitan statistical areas with both elastic and inelastic housing supplies across the United States. An important question is to what extent the supply side of the market contributed to the boom/bust dynamics. A second question is whether the significant changes in the industrial organization of the homebuilding industry exacerbated or ameliorated this supply impact.

### **Banking and Finance**

*No. 539, January 2012*

#### **Corporate Governance of Financial Institutions**

Hamid Mehran and Lindsay Mollineaux

Mehran and Mollineaux identify the tension created by the dual demands of financial institutions to be value-maximizing entities that also serve the public interest. They highlight the importance of information in addressing the public's desire for banks to be safe yet innovative. Regulators can choose several approaches to increase market discipline and information production. First, they can mandate information production outside of markets through increased regulatory disclosure. Second, they can directly motivate potential producers of information by changing their incentives. Traditional approaches to bank governance may interfere with the information content of prices. Thus, the lack of transparency in the banking industry may be a symptom rather than the primary cause of bad governance. The authors

provide the examples of compensation and resolution. Reforms that promote the quality of security prices through information production can improve the governance of financial institutions. Future research is needed to examine the interactions between disclosure, information, and governance.

*No. 544, February 2012*

### **Defaults and Losses on Commercial Real Estate Bonds during the Great Depression Era**

Tyler Wiggers and Adam B. Ashcraft

Wiggers and Ashcraft employ a unique data set of public commercial real estate (CRE) bonds issued during the Great Depression era (1920-32) to determine their frequency of default and total loss given default. Default rates on these bonds far exceeded those originated in subsequent periods. The authors' results confirm that making loans with higher loan-to-value ratios results in higher rates of default and loss. These results also support the business cycle's significance to the performance of CRE assets. Despite the large number of defaults in the early 1930s, the losses, which typically occurred after 1940, are comparable to those for contemporary loans, largely due to the rapid recovery of the economy from the Depression. This finding has relevance today, as numerous entities have a large amount of sub-performing CRE assets to work out. While the data point to better loss performance the quicker a problem loan is worked out, this may not hold true when there is a rapid recovery around the corner.

*No. 549, February 2012*

### **Trade Dynamics in the Market for Federal Funds**

Gara Afonso and Ricardo Lagos

Afonso and Lagos develop a model of the market for federal funds that explicitly accounts for its two distinctive features: banks have to search for a suitable counterparty, and once they have met, both parties negotiate the size of the loan and the repayment. The theory is used to answer a number of positive and normative questions: What are the determinants of the fed funds rate? How does the market reallocate funds? Is the market able to achieve an efficient reallocation of funds? The authors also use the model for theoretical and quantitative analyses of policy issues facing modern central banks.

*No. 550, February 2012*

### **An Empirical Study of Trade Dynamics in the Fed Funds Market**

Gara Afonso and Ricardo Lagos

The authors use minute-by-minute daily transaction-level payments data to document the cross-sectional and time-series behavior of the estimated prices and quantities negotiated by commercial banks in the fed funds market. They study the frequency and volume of trade, the size distribution of loans, the distribution of bilateral fed funds rates, and the intraday dynamics of the reserve balances held by commercial banks. Afonso and Lagos find evidence of the importance of the liquidity provision achieved by commercial banks that act as de facto intermediaries of fed funds.

*No. 553, March 2012*

### **The Private Premium in Public Bonds**

Anna Kovner and Chenyang Wei

This paper is the first to document the presence of a private premium in public bonds. Kovner and Wei find that spreads are 31 basis points higher for public bonds of private companies than for bonds of public companies, even after controlling for observable differences, including rating, financial performance, industry, bond characteristics, and issuance timing. The estimated private premium increases to 40 to 50 basis points when a propensity matching methodology is used or when the authors control for fixed issuer effects. Despite the premium pricing, bonds of private companies are no more likely to default or be downgraded than are public bonds. They do not have worse secondary market performance or higher credit default swap spreads nor are they necessarily less liquid. Bond investors appear to discount the value of privately held equity. The effect does not come only from the lack of a public market signal of asset quality, because very small public companies also pay high spreads.

*No. 555, March 2012*

### **Securities Lending**

Paul C. Lipson, Bradley K. Sabel, and Frank M. Keane

This paper, originally released in August 1989 as part of a Federal Reserve Bank of New York series on the U.S. securities markets, examines loans of Treasury and agency securities in the domestic market. It highlights some important institutional characteristics of securities loan transactions, in particular the common use of agents to arrange the terms of the loans. While the authors note that this characteristic sets securities lending apart from most repurchase agreement (repo) transactions, which occur bilaterally between a borrower and a lender, they observe that repo and securities loan transactions ultimately serve the same important economic purpose—to cover short positions used for hedging or arbitrage in related cash markets. The data used here, though largely informal, were provided by knowledgeable market participants.

*No. 557, March 2012*

### **An Analysis of OTC Interest Rate Derivatives Transactions: Implications for Public Reporting**

Michael Fleming, John Jackson, Ada Li, Asani Sarkar, and Patricia Zobel

This paper examines the over-the-counter (OTC) interest rate derivatives (IRD) market in order to inform the design of post-trade price reporting. The analysis uses a novel transaction-level data set to examine trading activity, the composition of market participants, levels of product standardization, and market-making behavior. The authors find that trading activity in the IRD market is dispersed across a broad array of product types, currency denominations, and maturities, leading to more than 10,500 observed unique product combinations. While a select group of standard instruments trade with relative frequency and may provide timely and pertinent price information for market participants, many other IRD instruments trade infrequently and with diverse contract terms, limiting the impact on price formation from the reporting of those transactions. Nonetheless, the authors find evidence of dealers hedging rapidly after large interest rate swap trades, suggesting that, for this product, a price-reporting regime could be designed in a manner that does not disrupt market-making activity.

## **Quantitative Methods**

*No. 548, February 2012*

### **Leverage and Asset Prices: An Experiment**

Marco Cipriani, Ana Fostel, and Daniel Houser

This is the first paper to test the asset pricing implication of leverage in a laboratory. Cipriani, Fostel, and Houser show that as theory predicts, leverage increases asset prices: When an asset can be used as collateral (that is, when the asset can be bought on margin), its price goes up. This increase is significant, and quantitatively close to what theory predicts. However, important deviations from the theory arise in the laboratory. First, the demand for the asset shifts when it can be used as collateral, even though agents do not exhaust their purchasing power when collateralized borrowing is not allowed. Second, the spread between collateralizable and noncollateralizable assets does not increase during crises, in contrast to what theory predicts.

*No. 554, March 2012*

### **DSGE Model-Based Forecasting**

Marco Del Negro and Frank Schorfheide

Dynamic stochastic general equilibrium (DSGE) models use modern macroeconomic theory to explain and predict comovements of aggregate time series over the business cycle and to perform policy analysis. Del Negro and Schorfheide explain how to use DSGE models for all three purposes—forecasting, storytelling, and policy experiments—and review their forecasting record. They also provide their own real-time assessment of the forecasting performance of the Smets and Wouters (2007) model data up to 2011, compare it with Blue Chip and Greenbook forecasts, and show how it changes as they augment the standard set of observables with external information from surveys (nowcasts, interest rate forecasts, and expectations for long-run inflation and output growth). The authors explore methods of generating forecasts in the presence of a zero-lower-bound constraint on nominal interest rates and conditional on counterfactual interest rate paths. Finally, they perform a postmortem of DSGE model forecasts of the Great Recession and show that forecasts from a version of the Smets-Wouters model augmented by financial frictions, and using spreads as an observable, compare well with Blue Chip forecasts.

## Research and Statistics Group Publications and Papers: January–March 2012

Publications are available at [www.newyorkfed.org/research/publication\\_annuals/index.html](http://www.newyorkfed.org/research/publication_annuals/index.html)

### **ECONOMIC POLICY REVIEW, VOL. 18, NO. 1**

#### **Subprime Foreclosures and the 2005 Bankruptcy Reform**

Donald P. Morgan, Benjamin Iverson,  
and Matthew Botsch

#### **The Microstructure of the TIPS Market**

Michael J. Fleming and Neel Krishnan

#### **Settlement Liquidity and Monetary Policy Implementation—Lessons from the Financial Crisis**

Morten L. Bech, Antoine Martin, and  
James McAndrews

### **CURRENT ISSUES IN ECONOMICS AND FINANCE, VOL. 18**

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#### **Why is the U.S. Share of World Merchandise Exports Shrinking?**

Benjamin R. Mandel

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#### **Policy Initiatives in the Global Recession: What Did Forecasters Expect?**

Carlos Carvalho, Stefano Eusepi, and Christian Grisse

### **STAFF REPORTS**

*No. 535, January 2012*

#### **Optimal Target Criteria for Stabilization Policy**

Marc P. Giannoni and Michael Woodford

*No. 536, January 2012*

#### **Heterogeneous Inflation Expectations, Learning, and Market Outcomes**

Carlos Madeira and Basit Zafar

*No. 537, January 2012*

#### **The Hitchhiker's Guide to Missing Import Price Changes and Pass-Through**

Etienne Gagnon, Benjamin R. Mandel, and  
Robert J. Vigfusson

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#### **Precarious Slopes? The Great Recession, Federal Stimulus, and New Jersey Schools**

Rajashri Chakrabarti and Sarah Sutherland

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#### **Corporate Governance of Financial Institutions**

Hamid Mehran and Lindsay Mollineaux

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#### **Is Increased Price Flexibility Stabilizing? Redux**

Saroj Bhattarai, Gauti Eggertsson, and Raphael Schoenle

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#### **House Price Booms, Current Account Deficits, and Low Interest Rates**

Andrea Ferrero

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#### **Crime, House Prices, and Inequality: The Effect of UPPs in Rio**

Claudio Frischtak and Benjamin R. Mandel

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#### **The Price Is Right: Updating of Inflation Expectations in a Randomized Price Information Experiment**

Olivier Armantier, Scott Nelson, Giorgio Topa,  
Wilbert van der Klaauw, and Basit Zafar

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#### **Defaults and Losses on Commercial Real Estate Bonds during the Great Depression Era**

Tyler Wiggers and Adam B. Ashcraft

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#### **Follow the Money: Quantifying Domestic Effects of Foreign Bank Shocks in the Great Recession**

Nicola Cetorelli and Linda S. Goldberg

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#### **Optimal Interest Rate Rules and Inflation Stabilization versus Price-Level Stabilization**

Marc P. Giannoni

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#### **Long-Term Debt Pricing and Monetary Policy Transmission under Imperfect Knowledge**

Stefano Eusepi, Marc Giannoni, and Bruce Preston

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**Leverage and Asset Prices: An Experiment**

Marco Cipriani, Ana Fostel, and Daniel Houser

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**Trade Dynamics in the Market for Federal Funds**

Gara Afonso and Ricardo Lagos

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**An Empirical Study of Trade Dynamics in the Fed Funds Market**

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**Deficits, Public Debt Dynamics, and Tax and Spending Multipliers**

Matthew Denes, Gauti B. Eggertsson, and Sophia Gilbukh

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**Workforce Skills across the Urban-Rural Hierarchy**

Jaison R. Abel, Todd M. Gabe, and Kevin Stolarick

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Andrew Haughwout, Richard W. Peach, John Sporn, and Joseph Tracy

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**Historical Echoes: Henry George – NYC Mayoral Candidate and Best-Selling, Self-Educated Political Economist**

Amy Farber, New York Fed Research Library

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**Cash Assets of Foreign Banks: An Example of Seasonal Adjustment Gone Awry**

Adam Copeland, Todd Keister, and Parinitha Sastry

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**Why Mortgage Refinancing Is Not a Zero-Sum Game**

Joseph Tracy and Joshua Wright

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**Historical Echoes: The Double Eagle Lands at the New York Fed**

Megan Cohen, New York Fed Research Library

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**How Did the Great Recession Affect New York State's Public Schools?**

Rajashri Chakrabarti and Elizabeth Setren

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**Tough Decisions, Depleted Revenues: New Jersey's Education Finances during the Great Recession**

Rajashri Chakrabarti and Sarah Sutherland

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**Historical Echoes: When Pigskins Fly – the Super Bowl and Other "Predictors"**

Mary Tao, New York Fed Research Library

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**How Has the Business of International Banking Changed?**

Linda Goldberg

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**Do Payday Lenders Target Minorities?**

Donald P. Morgan and Kevin J. Pan

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Amy Farber, New York Fed Research Library

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**How Colleges and Universities Can Help Their  
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Jaison R. Abel and Richard Deitz

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**Just Released: February's Empire State  
Manufacturing Survey Signals a Further Pickup**

Jason Bram and Richard Deitz

**The Dodd-Frank Act's Potential Effects  
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James Vickery

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Amy Farber, New York Fed Research Library

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**Gulf War II Veterans Home Buyers Tax Credit**

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Amy Farber, New York Fed Research Library

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Morten Bech, Antoine Martin, and Jamie McAndrews

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**Is Risk Rising in the Tri-Party Repo Market?**

Antoine Martin

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**Historical Echoes: Gee Whiz? No, G6—The First  
Modern International Economic Summit**

Amy Farber, New York Fed Research Library

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**Grading Student Loans**

Meta Brown, Andrew Haughwout, Donghoon Lee,  
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**Failure Is No Longer a (Free) Option for Agency  
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Michael Fleming

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**Just Released: January's Indexes of Coincident  
Economic Indicators Show Fairly Robust Activity  
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Jason Bram and James Orr

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Joshua Abel and Joseph Tracy

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**Just Released: Chairman Bernanke Returns  
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Jonathan McCarthy and Simon Potter

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Jonathan McCarthy, Simon Potter, and Ging Cee Ng

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Ayşegül Şahin and Christina Patterson

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**Skills Mismatch, Construction Workers,  
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Richard Crump and Ayşegül Şahin

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Argia M. Sbordone

**Historical Echoes: How the BLS Measured Up**

Amy Farber and Andrew Haughwout

**Reconciling Contrasting Signals in the Labor  
Market: The Role of Participation**

Stefania Albanesi, Ayşegül Şahin, and Joshua Abel

The views expressed in the publications, papers, and posts summarized in *Research Update* are those of the authors and do not necessarily reflect the position of the Federal Reserve Bank of New York or the Federal Reserve System.