Research UPDATE

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Liberty Street Economics Blog Series Examines the Costs of Superstorm Sandy

Recently, New York Fed economists published a series of posts on the effects of superstorm Sandy on the New York–New Jersey–Connecticut region. The bloggers examined the direct and indirect costs of the storm as well as the economic consequences of these costs in detail.

In "What Are the Costs of Superstorm Sandy?" Jaison Abel, Jason Bram, Richard Deitz, and James Orr outline the differences between the storm's direct costs, such as those associated with the destruction of buildings, automobiles, bridges, and roads, and its indirect costs, related to the loss of economic activity caused by disruptions to the region's infrastructure. They also discuss what these cost measures typically neglect to include—such as disruptions to everyday life (for example, time spent waiting in line for gasoline, longer and more arduous commutes to work, and discarded perishable food). Because of such omissions, the true costs of natural disasters are difficult to capture and may be understated.

Next, the bloggers further examine the indirect costs of the storm in "The Welfare Costs of Superstorm Sandy." They address an important type of disaster-related economic loss that often is not estimated or discussed in policymaking decisions: the deterioration in quality of life. The post focuses on how Sandy (and other such disasters) can have widespread adverse effects on quality of life, and illustrates how one can try to put an approximate dollar value on these effects.

In the third post of the series, "The Impact of Superstorm Sandy on New York City School Closures and Attendance," Rajashri Chakrabarti and Max Livingston analyze the storm's effect on the city's schools and, in particular, on students' educational outcomes. Widespread power outages and transportation challenges left New York City little choice but to close all schools the first week after the storm. However, schools damaged by the storm remained closed, with their students relocated elsewhere. The bloggers note that the loss of school days has negative effects on student learning and performance, and that overcrowding of schools hosting displaced students, long commutes to these host schools, and the additional efforts required of staff pose major obstacles. Moreover, psychological impacts are likely to be faced by all students, especially those in hard-hit areas.

Having assessed the direct and indirect costs of the storm in detail, Abel et al. then consider who will ultimately pay the economic costs imposed by the storm. "How Will We Pay for Superstorm Sandy?" finds that the federal government and private insurance companies will likely more than cover the aggregate costs. However, state and local governments

Also in this issue…

in the affected areas typically fund a significant amount of the relief effort up front, and delays in reimbursement can create short-term fiscal strain on these municipalities, especially small ones. Individuals and businesses may also face financial challenges as they await reimbursement.

Finally, in "The Path of Economic Recovery from Superstorm Sandy," Abel and his co-bloggers look at regional employment patterns following four past disasters—Hurricanes Andrew and Katrina, the 9/11 attack on the World Trade Center, and the earthquake in Northridge, California—to assess how the recovery from Sandy might play out. They observe that these events generally suggest that any employment declines resulting from the storm are likely to be reversed fairly quickly, and that a permanent loss of jobs in the region, while possible, is not likely.

The Superstorm Sandy series:

- "What Are the Costs of Superstorm Sandy?" by Jaison Abel, Jason Bram, Richard Deitz, and James Orr
- "The Welfare Costs of Superstorm Sandy," by Jaison Abel, Jason Bram, Richard Deitz, and James Orr
- "The Impact of Superstorm Sandy on New York City School Closures and Attendance," by Rajashri Chakrabarti and Max Livingston
- "How Will We Pay for Superstorm Sandy?" by Jaison Abel, Jason Bram, Richard Deitz, and James Orr
- "The Path of Economic Recovery from Superstorm Sandy," by Jaison Abel, Jason Bram, Richard Deitz, and James Orr ■

Research Group 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.
- *The Research Group of the Federal Reserve Bank of New York*—a guide for economists interested in joining the Group, as well as an overview of our staff, structure, and functions.
- *Liberty Street Economics*—a blog that enables our economists to engage with the public on important economic issues quickly and frequently.

Manhattan Home Prices Are Out of Line with Rents, Study Finds

An analysis of housing market trends in New York City's borough of Manhattan suggests that renting an apartment still offers better financial "value" than buying one. In "To Buy or Not to Buy? The Changing Relationship between Manhattan Rents and Home Prices" (*Current Issues in Economics and Finance,* vol. 18, no. 9), Jason Bram documents the movements in home purchase prices relative to residential rents over the past two decades. He notes that while both prices and rents have climbed over the period, prices have increased much more dramatically—a disparity that raises questions about the sustainability of current apartment prices.

The metric used by Bram to assess the financial value of different housing options is the price-rent ratio. For an individual home, the ratio is simply the residence's market price divided by the annual market rent it would generate. A high ratio suggests that housing prices are overvalued; a low ratio suggests the opposite. Bram notes that all the monthly costs associated with owning a home—maintenance, mortgage interest, property tax, and any owner costs, including the opportunity cost of a down payment—should not be substantially different from what one would pay in rent. To justify paying a premium to own, one would need to assume that home prices were going to appreciate in the future.

Bram tracks the changes in the price-rent ratio from 1989 to 2011. Following the 1989-1993 downturn, he notes, rents increased steadily while apartment prices lagged, causing the price-rent ratio for one- and two-bedroom units to bottom out in the mid-1990s. In the late 1990s, however, prices climbed much more quickly than rents, and the price-rent ratio began a fairly steady rise that continued through 2007. With the onset of the most recent recession, rents turned downward, but prices continued to increase, lifting the price-rent ratio to record highs. Bram views these trends as evidence that rents respond rapidly to cyclical changes in the economy, while price movements follow with a lag of up to two years. "This pattern is consistent with the view that rents are based more on market fundamentals, while prices reflect more speculative and psychological factors," he remarks.

Renting offers better financial "value" than buying, says Bram

Although price-rent ratios for Manhattan have dropped somewhat in the last four years, they are still at levels twice those of the mid-1990s. According to the author, the high ratios can be explained in part by lower mortgage rates, which tend to raise sales prices relative to rents by trimming financing costs, and by lower property taxes. In addition, speculative factors may have contributed to the long rise in price-rent ratios, with homebuyers continuing to "bet" that home prices would appreciate.

Bram sees some signs, however, that high price-rent ratios have begun to moderate: "While the analysis here covers the period through 2011, reports of accelerating rents but stable apartment prices in 2012 suggest that people may have tempered their expectations for price appreciation." ■

Top Blog Posts of Q4

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

Below are the top posts in the fourth quarter:

- "Grading Student Loans," by Meta Brown, Andrew Haughwout, Donghoon Lee, Maricar Mabutas, and Wilbert van der Klaauw, March 5, – 4,337 downloads

  The bloggers examine the overall student loan debt market as of third-quarter 2011, and find it likely that delinquency rates for these loans are understated.

- "The Different Paths of Greece and Spain to High Unemployment," by Thomas Klitgaard and Ayşegül Şahin, November 28 – 3,334 downloads

  Klitgaard and Şahin find that employment in Greece has fallen proportionally to the country's steep decline in GDP, while employment in Spain has fallen much more than output, due in part to the country's notable labor market flexibility.

- "The Puzzling Pre-FOMC Announcement 'Drift,'" by David Lucca and Emanuel Moench, July 11 – 2,456 downloads

  Lucca and Moench show that since 1994, more than 80 percent of the equity premium on U.S. stocks has been earned over the twenty-four hours preceding scheduled Federal Open Market Committee (FOMC) announcements, which occur only eight times a year.

- "Why (or Why Not) Keep Paying Interest on Excess Reserves?" by Gara Afonso, December 3 – 2,313 downloads

  Since October 2008, depository institutions in the United States have been paid interest on the balances they hold overnight at Federal Reserve Banks. Afonso discusses the benefits and costs of this practice, especially now that excess reserves have exceeded $1.5 trillion.

- "'Too-Big-to-Fail' Is One Big Phrase," by Amy Farber, October 5 – 2,159 downloads

  Farber looks back on the origins of the now widely used phrase "too-big-to-fail," and notes its usage as early as the mid-1970s. ■

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 the Group's work.

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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).

New York Fed website, fourth-quarter:

- "Shadow Banking," by Zoltan Pozsar, Tobias Adrian, Adam Ashcraft, and Hayley Boesky (*Staff Reports*, no. 458, July 2010) – 9,586 downloads
- "To Buy or Not to Buy? The Changing Relationship between Manhattan Rents and Home Prices," by Jason Bram (*Current Issues in Economics and Finance*, vol. 18, no. 9, 2012) – 4,755 downloads
- "An Analysis of OTC Interest Rate Derivatives Transactions: Implications for Public Reporting," by Michael Fleming, John Jackson, Ada Li, Asani Sarkar, and Patricia Zobel (*Staff Reports*, no. 557, March 2012) – 4,069 downloads

SSRN website, fourth-quarter:

- "Determinants and Impact of Sovereign Credit Ratings," by Richard Cantor and Frank Packer (*Economic Policy Review*, vol. 2, no. 2, October 1996) – 304 downloads
- "The Shadow Banking System: Implications for Financial Regulation," by Tobias Adrian and Hyun Song Shin (*Staff Reports*, no. 382, July 2009) – 259 downloads
- "The Corporate Governance of Banks," by Jonathan R. Macey and Maureen O'Hara (*Economic Policy Review*, vol. 9, no. 1, April 2003) – 215 downloads

For lists of the top-ten downloads, visit www.newyorkfed.org/research/top_downloaded/topdownloads.html.

Recently Published

Jaison Abel. 2012. "Productivity and the Density of Human Capital," with Ishita Dey and Todd M. Gabe. *Journal of Regional Science* 52, no. 4 (October): 562-86.

Tobias Adrian. 2012. "Shadow Banking Regulation," with Adam B. Ashcraft. *Annual Review of Financial Economics* 4, October: 99-140.

Nicola Cetorelli and Linda Goldberg. 2012. "Banking Globalization and Monetary Transmission." *Journal of Finance* 67, no. 5 (October): 1811-43.

Nicola Cetorelli and Linda Goldberg. 2012. "Liquidity Management of U.S. Global Banks: Internal Capital Markets in the Great Recession." *Journal of International Economics* 88, no. 2 (November): 299-311.

Andrea Ferrero. 2012. "The Macroeconomic Effects of the Large-Scale Asset Purchase Programs," with Han Chen and Vasco Cúrdia. *Economic Journal* 126, no. 564 (November): 289-315.

Michael Fleming. 2012. "Federal Reserve Liquidity Provision during the Financial Crisis of 2007-2009." *Annual Review of Financial Economics* 4, October: 161-77.

Hamid Mehran. 2012. "The Corporate Governance of Financial Institutions," with Lindsay Mollineaux. *Annual Review of Financial Economics* 4, October: 215-32.

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

Papers Presented

"Financial Intermediary Leverage and Financial Stability," Tobias Adrian. European Central Bank conference *Bank Funding, Markets, Instruments, and Implications for Corporate Lending and the Real Economy*, Frankfurt, Germany, October 8. With Nina Boyarchenko. Also presented at a University of Zurich seminar, Zurich, Switzerland, November 5; a University of Lugano seminar, Lugano, Switzerland, November 7; and a University of Lausanne seminar, Lausanne, Switzerland, November 8.

"Evolving Intermediation," Nicola Cetorelli. *Assessing Financial Intermediation: Measurement and Analysis*, a conference cosponsored by the U.S. Department of the Treasury's Office of Financial Research and the Financial Stability Oversight Council, Washington, D.C., December 6.

"DSGE Model-Based Forecasting," Marco Del Negro. *Macroeconomic Modeling in Times of Crisis*, Bank of France, Paris, France, October 25. With Frank Schorfheide.

"Rare Shocks, Great Recessions: Forecasting Commodity Prices," Marco Del Negro. *Methods and Applications for DSGE Models*, a conference cosponsored by the Federal Reserve Bank of Atlanta and the National Bureau of Economic Research, Atlanta, Georgia, October 12. With Vasco Cúrdia and Daniel Greenwald.

"Capital Controls: A Normative Analysis," Bianca De Paoli. *International Capital Flows and Spillovers in a Post-Crisis World*, a conference cosponsored by the Bank of England, the IMF *Economic Review*, the Bank of Canada, the University of British Columbia, St. Andrews University, the Scottish Institute for Research in Economics, the European Center for Advanced Research in Economics and Statistics, and the Centre for Economic Policy Research, London, England, December 13. Also presented at the Global Research Forum on International Macroeconomics and Finance, cosponsored by the European Central Bank, the Federal Reserve Board, and the Federal Reserve Bank of New York, Frankfurt, Germany, December 17.

"House Price Booms, Current Account Deficits, and Low Interest Rates," Andrea Ferrero. Management of Technology and Entrepreneurship/Hautes Études Commerciales Lausanne conference, Lausanne, Switzerland, October 3. Also presented at a Graduate Institute of Geneva seminar, Geneva, Switzerland, October 4.

"What Explains Japan's Persistent Deflation?" Andrea Ferrero. Queens College seminar, New York City, October 15.

"Trading Activity and Price Transparency in the Inflation Swap Market," Michael Fleming. Commodity Futures Trading Commission 2012 Research Conference, Washington, D.C., November 30. With John Sporn.

"Payment Size, Negative Equity, and Mortgage Default," Andreas Fuster. Workshop on Consumer Credit and Payments, Federal Reserve Bank of Philadelphia, Philadelphia, Pennsylvania, November 2. With Paul Willen.

"The Inflation-Output Trade-Off Revisited," Marc Giannoni. University of Quebec at Montreal seminar, Quebec, Canada, November 23. With Gauti Eggertsson.

"Liquidity Management of U.S. Global Banks: Internal Capital Markets in the Great Recession," Linda Goldberg. *Issues in the Internationalization of Banking*, Central Bank of Austria, Vienna, Austria, November 16. With Nicola Cetorelli.

"Managing Volatile Capital Flows—The Role of Financial Sector Development," Linda Goldberg. Graduate Institute of Geneva seminar, Geneva, Switzerland, October 24.

"Trends and Debates in Global Banking," Linda Goldberg. European Union Studies Center seminar, City University of New York, New York City, November 20.

"U.S. Global Banking Data," Linda Goldberg. *Issues in the Internationalization of Banking*, Central Bank of Austria, Vienna, Austria, November 15. With Nicola Cetorelli.

"What's Next Post-Election for Wall Street and the Economy in General?" Linda Goldberg. Women Corporate Directors 2012 Annual Fall Institute, New York City, November 7.

"A User's Guide on Labor Income Risk," Fatih Karahan. Center for the Advanced Study in Economics Efficiency seminar, Arizona State University, Phoenix, Arizona. November 9.

"Banking across Borders," Friederike Niepmann. Trinity College-Dublin seminar, Dublin, Ireland, November 20.

"The Measurement and Behavior of Uncertainty: Evidence from the ECB Survey of Professional Forecasters," Robert Rich. European Central Bank seminar *Directorate Economic Developments*, Frankfurt, Germany, October 11. With Joseph Song and Joseph Tracy. Also presented at the National Bank of Poland conference *Are We Really Forward-Looking? Measuring and Testing Expectations – Central Bank Perspective,* Warsaw, Poland, November 30.

"U.S. Dollar Funding Premium of Global Banks," Asani Sarkar. European Central Bank conference *Bank Funding, Markets, Instruments, and Implications for Corporate Lending and the Real Economy,* Frankfurt, Germany, October 8. With Warren Hrung.

"The Price Is Right: Updating of Inflation Expectations in a Randomized Price Information Experiment," Wilbert van der Klaauw. *Formation and Revision of Subjective Expectations*, a conference cosponsored by the Inter University Centre on Risk, Economic Policies, and Employment, Laval University, Quebec City, Canada, November 9.

"Securitization and the Fixed-Rate Mortgage," James Vickery. New York University, Stern School of Business seminar, New York City, October 1. With Andreas Fuster. Also presented at the Federal Reserve Bank of Chicago and University of Wisconsin-Madison Hulm (Housing-Urban-Labor-Macro) Conference, October 5; the Paul Woolley Centre for Capital Market Dysfunctionality Annual Conference 2012, University of Technology, Sydney, Australia, October 12; a University of Florida, Warrington School of Business research seminar, Gainesville, Florida, November 30; and an International Monetary Fund seminar, Washington, D.C., December 12.

"Determinants of College Major Choice: Identification Using an Information Experiment," Basit Zafar. Rutgers University seminar, New Brunswick, New Jersey, November 30.

"How Deeply Held Are Anti-American Attitudes among Pakistani Youth? Evidence Using Experimental Variation in Information," Basit Zafar. *Formation and Revision of Subjective Expectations,* a conference cosponsored by the Inter University Centre on Risk, Economic Policies, and Employment, Laval University Quebec City, Canada, November 8. ■

New Titles in the *Staff Reports* Series

International

No. 576, October 2012
Banking across Borders
Friederike Niepmann

This paper develops and tests a theoretical model that allows for the endogenous decision of banks to engage in international and global banking. International banking, where banks raise capital in the home market and lend it abroad, is driven by differences in factor endowments across countries. In contrast, global banking, where banks intermediate capital locally in the foreign market, arises from differences in country-level bank efficiency. Together, these two driving forces determine the foreign assets and liabilities of a banking sector. The model provides a rationale for the observed rise in global banking relative to international banking. Its key predictions regarding the cross-country pattern of foreign bank asset and liability holdings are strongly supported by the data.

No. 584, December 2012
Exchange Rate Pass-Through, Markups, and Inventories
Adam Copeland and James A. Kahn

A large body of research has established that exporters do not fully adjust their prices across countries in response to exchange rate movements, but instead allow their markups to vary. But while markups are difficult to observe directly, Copeland and Kahn show that inventory-sales ratios provide an observable counterpart. They then find evidence that inventory-sales ratios of imported vehicles respond to exchange rate movements to a degree consistent with pass-through on the order of 50 to 75 percent, on the high end of the range found in the literature.

No. 586, December 2012
Importers, Exporters, and Exchange Rate Disconnect
Mary Amiti, Oleg Itskhoki, and Jozef Konings

Large exporters are simultaneously large importers. Amiti, Itskhoki, and Konings show that this pattern is key to understanding low aggregate exchange rate pass-through as well as the variation in pass-through across exporters. First, they develop a theoretical framework in which firms with high import shares and high market shares have low exchange rate pass-through. Second, they test and quantify the theoretical mechanisms using Belgian firm-product-level data with information on exports by destination and imports by source country. The authors find that a small exporter with no imported inputs has a nearly complete pass-through, while a firm at the 95th percentile of both import intensity and market share distributions has a pass-through of 56 percent, with the marginal cost and markup channels playing roughly equal roles. The largest exporters are simultaneously high-market-share and high-import-intensity firms, which helps explain the low aggregate pass-through and exchange rate disconnect observed in the data.

Microeconomics

No. 587, December 2012
Agglomeration and Job Matching among College Graduates
Jaison R. Abel and Richard Deitz

Abel and Deitz study one potential source of urban agglomeration economies: better job matching. Focusing on college graduates, they construct two direct measures of job matching based on how well an individual's job corresponds to his or her college education. Consistent with matching-based theories of urban agglomeration, they find evidence that larger and thicker local labor markets help college graduates find better jobs by increasing both the likelihood and quality of a match. The authors then assess the extent to which better job matching of college-educated workers increases individual-level wages and thereby contributes to the urban wage premium. While they find that college graduates with better job matches do indeed earn higher wages on average, the contribution of such job matching to aggregate urban productivity appears to be relatively modest.

Banking and Finance

No. 577, October 2012

On Bounding Credit Event Risk Premia

Jennie Bai, Pierre Collin-Dufresne,
Robert S. Goldstein, and Jean Helwege

Reduced-form models of default that attribute a large fraction of credit spreads to compensation for credit event risk typically preclude the most plausible economic justification for such risk to be priced—namely, a "contagious" response of the market portfolio during the credit event. When this channel is introduced within a general-equilibrium framework for an economy comprised of a large number of firms, credit event risk premia have an upper bound of just a few basis points and are dwarfed by the contagion premium. The authors provide empirical evidence supporting the view that credit event risk premia are minuscule.

No. 578, October 2012

Have Financial Markets Become More Informative?

Jennie Bai, Thomas Philippon, and Alexi Savov

The finance industry has grown. Financial markets have become more liquid. Information technology has improved. But have prices become more informative? Using stock and bond prices to forecast earnings, Bai, Philippon, and Savov find that the information content of market prices has not increased since 1960. The magnitude of earnings surprises, however, has increased. A baseline model predicts that as the efficiency of information production increases, prices become more disperse and covary more strongly with future earnings. The forecastable component of earnings improves capital allocation and serves as a direct measure of welfare. The authors find that this measure has remained stable. A model with endogenous information acquisition predicts that an increase in fundamental uncertainty also increases informativeness as the incentive to produce information grows. The study finds that uncertainty has indeed increased outside of the S&P 500, but price informativeness has not.

No. 579, October 2012

When Is There a Strong Transfer Risk from the Sovereigns to the Corporates? Property Rights Gaps and CDS Spreads

Jennie Bai and Shang-Jin Wei

Using a novel credit default swaps (CDS) data set covering government and corporate entities across thirty countries, Bai and Wei study both the average strength of the transfer risks and the role of institutions in mitigating such risks. They find that: 1) sovereign risk on average has a statistically and economically significant influence on corporate credit risks (all else equal, a 100 basis point increase in the sovereign CDS spread leads to an increase in corporate CDS spreads of 71 basis points); 2) the sovereign-corporate relation varies across corporations, with state-owned companies exhibiting a stronger relation with the sovereign; and 3) the presence of strong property rights institutions, however, tends to weaken the connection. In contrast, contracting institutions (offering protection of creditor rights or minority shareholder rights) do not appear to matter much in this context.

No. 580, October 2012

Shadow Banking: A Review of the Literature

Tobias Adrian and Adam B. Ashcraft

Adrian and Ashcraft provide an overview of the rapidly evolving literature on shadow credit intermediation. The shadow banking system consists of a web of specialized financial institutions that conduct credit, maturity, and liquidity transformation without direct, explicit access to public backstops. The lack of such access to sources of government liquidity and credit backstops makes shadow banks inherently fragile. Much of shadow banking activities is intertwined with the operations of core regulated institutions such as bank holding companies and insurance companies, thus creating a source of systemic risk for the financial system at large. The authors review fundamental reasons for the existence of shadow banking, explain the functioning of shadow banking institutions and activities, discuss why shadow banks need to be regulated, and review the impact of recent reform efforts on shadow banking credit intermediation.

No. 581, November 2012

Forecasting through the Rear-View Mirror: Data Revisions and Bond Return Predictability

Eric Ghysels, Casidhe Horan, and Emanuel Moench

Real-time macroeconomic data reflect the information available to market participants, whereas final data—containing revisions and released with a delay—overstate the information set available to them. Ghysels, Horan, and Moench document that the in-sample and out-of-sample Treasury return predictability is significantly diminished when real-time as opposed to revised macroeconomic data are used. In fact, much of the predictive information in macroeconomic time series is due to the data revision and publication lag components.

No. 582, November 2012
Payment Size, Negative Equity, and Mortgage Default
Andreas Fuster and Paul S. Willen

Surprisingly little is known about the importance of mortgage payment size for default, as efforts to measure the treatment effect of rate increases or loan modifications are confounded by borrower selection. Fuster and Willen study a sample of hybrid adjustable-rate mortgages that have experienced large rate reductions over the past years and are largely immune to these selection concerns. They show that interest rate changes dramatically affect repayment behavior. Their estimates imply that cutting a borrower's payment in half reduces his hazard of becoming delinquent by about two-thirds, an effect that is approximately equivalent to lowering the borrower's combined loan-to-value ratio from 145 to 95 (holding the payment fixed). These findings shed light on the driving forces behind default behavior and have important implications for public policy.

No. 583, November 2012
Discussion of "An Integrated Framework for Multiple Financial Regulations"
Tobias Adrian

A 2012 paper by Goodhart, Kashyap, Tsomocos, and Vardoulakis (GKTV) proposes a dynamic general-equilibrium framework that provides a conceptual—and to some extent quantitative—framework for the analysis of macroprudential policies. The distinguishing feature of GKTV's paper relative to any other on macroprudential policy is its study of a setting with multiple financial frictions that permits the analysis of multiple macroprudential policy tools at the same time. The modeling approach includes various market failures such as incomplete markets with heterogeneous agents, "fire-sale" externalities, and margin spirals, all of which provide rationales for policies designed to improve welfare. In GKTV's model, liquidity ratios are found to be more efficient preemptive tools than capital ratios or loan-to-value ratios. However, these liquidity ratios need to be relaxed in times of crisis in order to reduce adverse effects from fire-sale externalities. It remains to be seen how robust these findings are in alternative, fully dynamic settings. Furthermore, GKTV's approach does not address the tension between micro- and macroprudential objectives, and the timing of the buildup and release of policies is not specified precisely.

No. 589, December 2012
No Good Deals—No Bad Models
Nina Boyarchenko, Mario Cerrato, John Crosby, and Stewart Hodges

Faced with the problem of pricing complex contingent claims, investors seek to make their valuations robust to model uncertainty. Boyarchenko et al. construct a notion of a model-uncertainty-induced utility function, and show that model uncertainty increases investors' effective risk aversion. Using this utility function, they extend the "no good deals" methodology of Cochrane and Saá-Requejo (2000) to compute lower and upper good-deal bounds in the presence of model uncertainty. The authors illustrate the methodology using some numerical examples.

Quantitative Methods

No. 574, October 2012
The Forward Guidance Puzzle
Marco Del Negro, Marc Giannoni, and Christina Patterson

With short-term interest rates at the zero lower bound, forward guidance has become a key tool for central bankers, and yet we know little about its effectiveness. Standard medium-scale DSGE models tend to grossly overestimate the impact of forward guidance on the macroeconomy—a phenomenon the authors call the "forward guidance puzzle." Del Negro, Giannoni, and Patterson explain why this is the case and describe one approach to addressing this issue.

No. 575, October 2012
Assessing the Quality of "Furfine-Based" Algorithms
Olivier Armantier and Adam Copeland

To conduct academic research on the federal funds market, historically one of the most important financial markets in the United States, some empirical economists have used market-level measures published by the Markets Group of the Federal Reserve Bank of New York. To obtain more disaggregate data, some researchers have relied on a separate source of information: individual transactions inferred indirectly from an algorithm based on the work of Furfine (1999). To date, however, the accuracy of this algorithm has not been formally established. Armantier and Copeland conduct a test aimed at assessing the ability of the algorithm to correctly identify individual overnight fed funds transactions conducted by two banks that are among the most active in the fed funds market. The results are discouraging. The authors estimate the average type I and type II errors from 2007 to 2011 to be 81 percent and 23 percent, respectively. Furthermore, they argue that these errors: 1) apply to almost half of the algorithm's output, 2) introduce systematic biases, and 3) may not subside when the algorithm's output is aggregated. Their results therefore raise serious concerns about the appropriateness of using the algorithm's output to study the fed funds market. Because the Markets Group relies on a different source of data than the algorithm output, the authors' results have no bearing on the Group's understanding of the fed funds market and its calculation of market-level measures, including the effective fed funds rate.

No. 585, December 2012

Rare Shocks, Great Recessions

Vasco Cúrdia, Marco Del Negro, and Daniel Greenwald

The authors estimate a DSGE model in which rare, large shocks can occur, but replace the commonly used Gaussian assumption with a student's *t*-distribution. Results from the Smets and Wouters (2007) model estimated on the usual set of macroeconomic time series over the 1964-2011 period indicate that: 1) the student's *t*-specification is strongly favored by the data, even when one allows for low-frequency variation in the volatility of the shocks, and 2) the estimated degrees of freedom are quite low for several shocks that drive U.S. business cycles, implying an important role for rare, large shocks. This result holds even if the authors exclude the Great Recession from the sample. They also show that inference about low-frequency changes in volatility—and, in particular, inference about the magnitude of the Great Moderation—is different once they allow for fat tails.

No. 588, December 2012

The Measurement and Behavior of Uncertainty: Evidence from the ECB Survey of Professional Forecasters

Robert Rich, Joseph Song, and Joseph Tracy

Rich, Song, and Tracy use matched-point and density forecasts of output growth and inflation from the ECB Survey of Professional Forecasters to derive measures of forecast uncertainty, forecast dispersion, and forecast accuracy. They construct uncertainty measures from aggregate density functions as well as from individual histograms. The uncertainty measures display countercyclical behavior, and there is evidence of increased uncertainty for output growth and inflation since 2007. The results also indicate that uncertainty displays a very weak relationship with forecast dispersion, corroborating the findings of other recent studies indicating that disagreement is not a valid proxy for uncertainty. In addition, the authors find no correspondence between movements in uncertainty and predictive accuracy, suggesting that time-varying conditional variance estimates may not provide a reliable proxy for uncertainty. Last, using a regression equation that can be interpreted as a (G)ARCH-M-type model, the authors find limited evidence of linkages between uncertainty and levels of inflation and output growth.

No. 590, December 2012

Liquidity, Volatility, and Flights to Safety in the U.S. Treasury Market: Evidence from a New Class of Dynamic Order Book Models

Robert Engle, Michael Fleming, Eric Ghysels, and Giang Nguyen

The authors propose a new class of dynamic order book models that allow them to: 1) study episodes of extreme low liquidity and 2) unite liquidity and volatility in one framework through which their joint dynamics can be examined. Liquidity and volatility in the U.S. Treasury securities market are analyzed around the time of economic announcements, throughout the recent financial crisis, and during flight-to-safety episodes. Engle et al. document that Treasury market depth declines sharply during the crisis, accompanied by increased price volatility, but trading activity seems unaffected until after the Lehman Brothers bankruptcy. The models' key finding is that price volatility and depth at the best bid and ask prices exhibit a negative feedback relationship and that each becomes more persistent during the crisis. Lastly, the authors characterize the Treasury market during flights to safety as having much lower market depth, along with higher trading volume and greater price uncertainty. ■

Research and Statistics Group Publications and Posts: October–December 2012

Publications are available at www.newyorkfed.org/research/publication_annuals/index.html or may be accessed by clicking on the publication titles below.

ECONOMIC POLICY REVIEW, VOL. 18

No. 3
Housing Busts and Household Mobility: An Update
Fernando Ferreira, Joseph Gyourko, and Joseph Tracy

Key Mechanics of the U.S. Tri-Party Repo Market
Adam Copeland, Darrell Duffie, Antoine Martin, and Susan McLaughlin

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