

Research Update

Research and Statistics Group

www.newyorkfed.org/research

Commodity Price Moves Have Fairly Modest Effects on U.S. Inflation

Rising fuel prices are often thought to drive inflation in other goods and services. A new study, however, suggests that the effects of oil and other commodity price moves on U.S. inflation are more modest than one might expect.

In “Commodity Price Movements and PCE Inflation,” author Bart Hobijn calculates the contribution that changes in the price of crops and oil and gas made to the PCE, or personal consumption expenditures, index of U.S. inflation between June 2006 and June 2008 (*Current Issues in Economics and Finance*, vol. 14, no. 8).

Analyzing data on inter-industry purchases and sales, he determines that 1.5 percentage points of the 3.2 percent annualized PCE inflation over the period—slightly less than half of the growth in the index—can be linked to crop and oil and gas price increases. For *core* PCE inflation, which excludes food and fuel, 0.7 percentage point of the 2.2 percent annualized figure—a little less than a third of the growth in the index—stems from these increases.

These relatively modest figures lead Hobijn to conclude that “commodity prices—and particularly energy prices—are not the controlling force in core inflation dynamics that they are sometimes assumed to be.”

The author also studies the effect of swings in the price of crops and energy on the price of specific goods and services purchased by U.S. consumers. Here, he finds that commodity price increases affect only a limited set of goods prices. Higher crop prices translate narrowly into price hikes for food, tobacco, and gardening supplies; the effects of rising oil prices are largely confined to fuel, utility, and transportation prices. Hobijn observes that if higher prices are seen in core consumer goods and services, then “other inflationary pressures are undoubtedly at work.”

Also in this issue...

Most downloaded publications	2
<i>Staff Reports</i> : New titles	3
Papers recently published	
by Research Group economists	6
Papers presented at conferences	8
Publications and papers: October-December	10

The study focuses on a two-year period when crude petroleum prices increased at an average annual rate of 40 percent and grain prices rose at a 62 percent clip. Hobbijn explains that while these trends have reversed sharply in the second half of 2008, the effects of the declines in oil

and grain prices would be calculated in the same way and should have a proportional effect on inflation.

The article is available at www.newyorkfed.org/research/current_issues/ci14-8.html.

Most Downloaded Publications

Below are the top Research Group articles and papers downloaded 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, 2008:

- “Understanding the Securitization of Subprime Mortgage Credit,” by Adam B. Ashcraft and Til Schuermann (*Staff Reports*, no. 318, March 2008) – 18,112 downloads
- “The Yield Curve as a Predictor of U.S. Recessions,” by Arturo Estrella and Frederic S. Mishkin (*Current Issues in Economics and Finance*, Volume 2, Number 7, June 1996) – 10,083 downloads
- “Liquidity, Monetary Policy, and Financial Cycles,” by Tobias Adrian and Hyun Song Shin (*Current Issues in Economics and Finance*, Volume 14, Number 1, January/February 2008) – 7,704 downloads

SSRN website, through 2008:

- “Understanding the Securitization of Subprime Mortgage Credit,” by Adam B. Ashcraft and Til Schuermann (*Staff Reports*, no. 318, March 2008) – 3,974 downloads
- “The Consolidation of the Financial Services Industry: Causes, Consequences, and Implications for the Future,” by Allen N. Berger, Rebecca S. Demsetz, and Philip E. Strahan (*Staff Reports*, no. 55, December 1998) – 2,151 downloads
- “An Empirical Analysis of Stock and Bond Market Liquidity,” by Tarun Chordia, Asani Sarkar, and Avanidhar Subrahmanyam (*Staff Reports*, no. 164, March 2003) – 1,780 downloads

For lists of the year's top-ten downloads, visit www.newyorkfed.org/research/top_downloaded/index.html.

New Titles in the *Staff Reports Series*

The following new staff reports are available at www.newyorkfed.org/research/staff_reports.

MACROECONOMICS AND GROWTH

No. 355, November 2008

Imperfectly Credible Disinflation under Endogenous Time-Dependent Pricing
Marco Bonomo and Carlos Carvalho

Bonomo and Carvalho examine how credibility affects the outcome of a disinflation in a model with endogenous time-dependent pricing rules. Both the initial degree of price rigidity, calculated optimally, and, more notably, changes in the duration of price spells during disinflation play an important role in explaining the effects of imperfect credibility. The authors initially consider the costs of disinflation when the degree of credibility is fixed, and then allow agents to use Bayes' rule to update beliefs about the "type" of monetary

authority that they face. In both cases, the interaction between the endogeneity of time-dependent rules and imperfect credibility increases the output costs of disinflation. The pattern of the output response is more realistic in the case with learning.

No. 359, December 2008

Rethinking the Measurement of Household Inflation Expectations: Preliminary Findings

Wilbert van der Klaauw, Wändi Bruine de Bruin, Giorgio Topa, Simon Potter, and Michael Bryan

This paper reports preliminary findings from a Federal Reserve Bank of New York research program aimed at improving survey measures of inflation expectations. The authors find that seemingly small differences in how inflation is referred to in a survey can lead respondents to consider significantly different price concepts. For near-term inflation, the "prices in general" question in the monthly Reuters/University

Publications and Papers

The Research and Statistics Group produces a wide range of publications:

- *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.

of Michigan Surveys of Consumers can elicit responses that focus on the most visible prices, such as gasoline or food. Questions on the “rate of inflation” can lead to responses on the prices that U.S. citizens pay in general—an interpretation, or concept, closer to the definition of inflation that economists have in mind; they also lead to both lower levels of reported inflation and to lower disagreement among respondents. In addition, the authors present results associated with new survey questions that assess the degree of individual uncertainty about future inflation outcomes as well as future expected wage changes. Finally, using the panel dimension of the surveys, the study finds that individual responses exhibit considerable persistence, both in the expected level of inflation and in forecast uncertainty. Respondents who are more uncertain make larger revisions to their expectations in the next survey.

INTERNATIONAL

No. 351, October 2008

Aggregation and the PPP Puzzle in a Sticky-Price Model

Carlos Carvalho and Fernanda Nechio

Carvalho and Nechio study the purchasing power parity (PPP) puzzle in a multisector, two-country, sticky-price model. The authors show that deviations of the real exchange rate from PPP are more volatile and persistent when compared with a counterfactual one-sector world economy that features the same average frequency of price changes and is otherwise identical to the multisector world economy. When simulated with a sectoral distribution of price stickiness that matches the microeconomic evidence for the U.S. economy, the model produces a half-life of deviations from PPP of forty-five months. In contrast, the half-life of such deviations in the counterfactual one-sector economy is only slightly above one year. Their model also provides a decomposition of this difference in persist-

ence that allows a structural interpretation of the approaches found in the empirical literature on aggregation and the real exchange rate.

MICROECONOMICS

No. 350, October 2008

Housing Busts and Household Mobility

Fernando Ferreira, Joseph Gyourko, and Joseph Tracy

Using two decades of American Housing Survey data from 1985 to 2005, the authors estimate the influence of negative home equity and rising mortgage interest rates on household mobility. They find that both factors lead to lower, not higher, mobility rates over time. The effects are economically large—mobility is almost 50 percent lower for owners with negative equity in their homes. This finding does not imply that current concerns over defaults and homeowners having to relocate are entirely misplaced. It does indicate that, in the past, the mortgage lock-in effects of these two factors were dominant over time. The study observes that policymakers may wish to begin considering the consequences of mortgage lock-in and reduced household mobility because they are quite different from the consequences associated with default and higher mobility.

BANKING AND FINANCE

No. 349, October 2008

Liquidity and Congestion

Gara M. Afonso

This paper studies the relationship between the arrival of potential investors and market liquidity in a search-based model of asset trading. The entry of investors into a specific market causes two contradictory effects. First, it reduces trading costs, which then attracts new investors (the thick market externality effect). But second, as investors concentrate on one side of the

market, the market becomes “congested,” decreasing the returns to participating in this market and discouraging new investors from entering (what Afonso calls the *congestion effect*). The equilibrium level of market liquidity depends on which of the two effects dominates. When congestion is the leading effect, some interesting results arise. In particular, the author finds that diminishing trading costs in this market can impair liquidity and reduce welfare.

No. 352, October 2008
**Systemic Risk and Liquidity
 in Payment Systems**

Gara M. Afonso and Hyun Song Shin

Afonso and Shin study liquidity and systemic risk in high-value payments systems. Flows in high-value systems are characterized by high velocity, meaning that the total amount paid and received is high relative to the stock of reserves. In such systems, banks rely heavily on incoming funds to finance outgoing payments, necessitating a high degree of coordination and synchronization. The authors use lattice-theoretic methods to solve for the unique fixed point of an equilibrium mapping and conduct comparative statics analyses on changes to the environment. They find that banks attempting to conserve liquidity cause an increase in the demand for intraday credit and, ultimately, a disruption of payments. Additionally, they find that when a bank is identified as vulnerable to failure and other banks choose to cancel payments to that bank, there are systemic repercussions for the whole financial system.

No. 353, October 2008
**The Case for TIPS: An Examination
 of the Costs and Benefits**

Jennifer Roush, William Dudley,
 and Michelle Steinberg Ezer

Several studies have shown that, ex post, the issuance of Treasury Inflation-Protected Securities (TIPS) has cost U.S. taxpayers money. The authors propose that evaluations of the TIPS program be more com-

prehensive and focus on the ex ante costs of TIPS issuance versus nominal Treasury issuance and, especially when these costs are negligible, the more difficult-to-measure benefits of the program. Their study finds that the ex ante costs of TIPS issuance versus nominal Treasury issuance are currently about equal and that TIPS provide meaningful benefits to investors and policymakers.

No. 354, November 2008

The Topology of the Federal Funds Market
 Morten L. Bech and Enghin Atalay

The recent turmoil in global financial markets underscores the importance of the federal funds market as a means of distributing liquidity throughout the financial system and as a tool for implementing monetary policy. In this paper, Bech and Atalay explore the network topology of the federal funds market. They find that the network is sparse, exhibits the small-world phenomenon, and is disassortative. In addition, reciprocity loans track the federal funds rate, and centrality measures are useful predictors of the interest rate of a loan.

No. 356, November 2008

**Which Bank Is the “Central” Bank?
 An Application of Markov Theory to the
 Canadian Large-Value Transfer System**
 Morten L. Bech, James T. E. Chapman,
 and Rod Garratt

Recently, economists have argued that a bank’s importance within the financial system depends not only on its individual characteristics but also on its position within the banking network. A bank is deemed to be “central” if, based on the authors’ network analysis, it is predicted to hold the most liquidity. In this paper, the authors use a method similar to Google’s PageRank procedure to rank banks in the Canadian Large-Value Transfer System. In doing so, they obtain estimates of the payment processing speeds for the individual banks. These differences in processing speeds are essential for explaining why observed daily

distributions of liquidity differ from the initial distributions, which are determined by the credit limits selected by banks.

No. 357, November 2008

**The Federal Home Loan Bank System:
The Lender of Next-to-Last Resort?**

Adam Ashcraft, Morten L. Bech,
and W. Scott Frame

The Federal Home Loan Bank (FHLB) System is a large, complex, and understudied government-sponsored liquidity facility that currently has more than \$1 trillion in secured loans outstanding, mostly to commercial banks and thrifts. Ashcraft, Bech, and Frame document the significant role played by the FHLB System at the onset of the ongoing financial crisis and provide evidence on the uses of these funds by the System's bank and thrift members. Next, they identify the trade-offs faced by member-borrowers when choosing between accessing the FHLB System or the Federal Reserve's discount window during the crisis period. The paper concludes by describing the fragmented U.S. lender-of-last-resort framework and finding that additional

clarity about the respective roles of the various liquidity facilities would be helpful.

No. 358, November 2008

Seismic Effects of the Bankruptcy Reform
Donald P. Morgan, Benjamin Iverson,
and Matthew Botsch

Morgan, Iverson, and Botsch argue that the 2005 bankruptcy abuse reform (BAR) contributed to the surge in subprime foreclosures that followed its passage. Before BAR, distressed mortgagors could free up income by filing for bankruptcy and having their unsecured debts discharged. BAR blocks that maneuver for better-off filers by way of a means test. The authors identify the effects of BAR using state home equity bankruptcy exemptions; filers in low-exemption states were not very protected before BAR, so they would be less affected by the reform. Difference-in-difference regressions confirm four predictions implied by that identification strategy. These findings add to research trying to explain the surge in subprime foreclosures and to a broader literature on household bankruptcy demand and credit supply. ■

Recently Published

Tobias Adrian and Joshua Rosenberg. 2008. "Stock Returns and Volatility: Pricing the Short-Run and Long-Run Components of Market Risk." *Journal of Finance* 63, no. 6 (December): 2997-3030.

Olivier Armantier. 2008. "Approximation of Bayesian Nash Equilibrium," with Jean-Pierre Florens and Jean-Francois Richard. *Journal of Applied Econometrics* 23, no. 7 (December): 965-81.

Olivier Armantier. 2008. "Domestic Airline Alliances and Consumer Welfare," with Oliver Richard. *RAND Journal of Economics* 39, no. 3 (autumn): 875-904.

Marco Del Negro. 2008. "Forming Priors for DSGE Models (and How It Affects the Assessment of Nominal Rigidities)," with

Frank Schorfheide. *Journal of Monetary Economics* 55, no. 7 (October): 1191-1208.

Linda Goldberg. 2008. "Exchange Rates and Foreign Direct Investment." In Kenneth A. Reinert and Ramkishen S. Rajan, eds., *The Princeton Encyclopedia of the World Economy*. Princeton, N.J.: Princeton University Press.

Linda Goldberg. 2008. "Vehicle Currency Use in International Trade," with Cédric Tille. *Journal of International Economics* 76, no. 2 (December): 177-92.

Linda Goldberg. 2008. Comment on "International Currency and the U.S. Current Account Deficit," by Shin-Ichi Fukuda and Yoshifumi Kon. In Takatoshi Ito and Andrew K. Rose, eds., *International*

Financial Issues in the Pacific Rim: Global Imbalances, Financial Liberalization, and Exchange Rate Policy. East Asia Seminar on Economics 17. NBER conference volume. Chicago: University of Chicago Press.

Antoine Martin. 2008. "Currency Competition." In Kenneth A. Reinert and Ramkishen S. Rajan, eds., *The Princeton Encyclopedia of the World Economy*. Princeton, N.J.: Princeton University Press.

Antoine Martin. 2008. "Multiple Currencies." In Kenneth A. Reinert and Ramkishen S. Rajan, eds., *The Princeton Encyclopedia of the World Economy*. Princeton, N.J.: Princeton University Press.

Antoine Martin. 2008. "Understanding the Cost Difference between Intraday and Overnight Liquidity," with Joydeep Bhattacharya and Joseph H. Haslag. *Journal of Financial Transformation* 24: 105-7.

Paolo Pesenti. 2008. "The Simple Geometry of Transmission and Stabilization in Closed and Open Economies," with Giancarlo Corsetti. In Richard H. Clarida and Francesco Giavazzi, eds., *NBER International Seminar on Macroeconomics 2007*, 65-116. Chicago: University of Chicago Press.

Argia Sbordone. 2008. "Trend Inflation, Indexation, and Inflation Persistence in the New Keynesian Phillips Curve," with Timothy Cogley. *American Economic Review* 98, no. 5 (December): 2101-26.

Argia Sbordone. 2008. Comment on "Expectations, Monetary Policy, and the Misalignment of Traded Goods Prices," by Michael B. Devereux and Charles Engel. In Richard H. Clarida and Francesco Giavazzi, eds., *NBER International Seminar on Macroeconomics 2007*, 169-72. Chicago: University of Chicago Press.

David Skeie. 2008. "Banking with Nominal Deposits and Inside Money." *Journal of Financial Intermediation* 17, no. 4 (October): 562-84.

Wilbert van der Klaauw. 2008. "A Demographic Analysis of the Family Structure Experiences of Children in the United States," with David Blau. *Review of Economics of the Household* 6, no. 3 (September): 193-221.

James Vickery. 2008. "(How and Why) Do Small Firms Manage Interest Rate Risk?" *Journal of Financial Economics* 87, no. 2: 446-70.

James Vickery. 2008. "Patterns of Rainfall Insurance Participation in Rural India," with Xavier Giné and Robert Townsend. *World Bank Economic Review* 22, no. 3: 539-66.

Tanju Yorulmazer. 2008. "Cash-in-the-Market Pricing and Optimal Resolution of Bank Failures," with Viral V. Acharya. *Review of Financial Studies* 21, no. 6 (November): 2705-42. ■

Other New Publications

- *The Research Group of the Federal Reserve Bank of New York*: This online guide, updated for 2008-09, offers economists interested in joining the Group a fuller understanding of our activities; our research and policy work; and our staff, structure, and functions.

www.newyorkfed.org/research/research_group/index.html

Papers Presented by Economists in the Research and Statistics Group

“Human Capital and Economic Activity in Urban America,” Jaison Abel. NBER Program on Technological Change and Productivity Measurement seminar, Cambridge, Massachusetts, December 5.

“The Regional Production, Stock, and Flow of Human Capital,” Jaison Abel and Richard Deitz. Fifty-fifth North American Meetings of the Regional Science Association International, New York City, November 21.

“Financial Intermediary Leverage and Value-at-Risk,” Tobias Adrian. Washington University Olin Business School seminar, St. Louis, Missouri, November 21. With Hyun Song Shin.

“Global Liquidity and Exchange Rates,” Tobias Adrian. International Monetary Fund seminar, Washington, D.C., December 10. With Hyun Song Shin and Erkki Etula.

“Pricing the Term Structure with Linear Regressions,” Tobias Adrian. New York University Stern School of Business seminar, New York City, October 13. With Emanuel Moench.

“Systemic Risk and Liquidity in Payment Systems,” Gara Afonso. *Journal of Money, Credit, and Banking Conference on Liquidity in Frictional Markets*, held at the Federal Reserve Bank of Cleveland, Cleveland, Ohio, November 14. With Hyun Song Shin. Also presented at a Bank of Canada workshop, Ottawa, Ontario, Canada, November 19.

“Precautionary Reserves and the Interbank Market,” Adam Ashcraft, James McAndrews, and David Skeie. *Journal of Money, Credit, and Banking Conference on Liquidity in Frictional Markets*, held at the Federal Reserve Bank of Cleveland, Cleveland, Ohio, November 14.

“The Federal Home Loan Bank System: The Lender of Next-to-Last Resort?” Morten Bech. Danish Center for Accounting and Finance seminar, Copenhagen, Denmark, October 30. With Adam Ashcraft and W. Scott Frame. Also presented at the Eleventh Annual Research Conference of De Nederlandsche Bank, Amsterdam, the Netherlands, October 31.

“Estimating the Cross-Sectional Distribution of Price Stickiness from Aggregate Data,” Carlos Carvalho. Latin American Meeting of the Econometric Society, Rio de Janeiro, Brazil, November 22. With Niels Dam.

“Imperfectly Credible Disinflation under Endogenous Time-Dependent Pricing,” Carlos Carvalho. Bank of Japan seminar, Tokyo, Japan, October 3. With Marco Bonomo.

“Credit Frictions and Optimal Monetary Policy,” Vasco Cúrdia. National Bank of Belgium conference, Brussels, Belgium, October 17. With Michael Woodford.

“Banking Globalization, Monetary Transmission, and the Lending Channel,” Linda Goldberg. Baruch College Zicklin School of Business seminar, New York City, November 11. With Nicola Cetorelli. Also presented at the International Monetary Fund Ninth Jacques Polak Annual Research Conference on Macro-Financial Linkages, Washington, D.C., November 13; a European Central Bank conference, Frankfurt, Germany, December 2; and a Bank for International Settlements seminar, Frankfurt, Germany, December 5.

“Macroeconomic Interdependence and the International Role of the Dollar,” Linda Goldberg. International Monetary Fund Research Department seminar, Washington, D.C., November 4. With Cédric Tille. Also presented at a George Washington University

Department of Economics seminar, Washington, D.C., December 10.

“Real-Time Inflation Forecasting in a Changing World,” Jan Groen. Centre for International Macroeconomics and Finance conference *Forecasting under Model Instability*, Cambridge, England, November 28. With Richard Paap and Francesco Ravazzolo.

“Revisiting Useful Approaches to Data-Rich Macroeconomic Forecasting,” Jan Groen. Centre for Microdata Methods and Practice conference *Unobserved Factor Models*, London, England, November 20. With George Kapetanios.

“Commitment and Equilibrium Bank Runs,” Todd Keister. University of Kansas Department of Economics seminar, Lawrence, Kansas, November 7. With Huberto Ennis. Also presented at a Rice University Department of Economics seminar, Houston, Texas, November 17.

“Run Equilibria in the Green-Lin Model of Financial Intermediation,” Todd Keister. Ohio State University Department of Economics seminar, Columbus, Ohio, October 31. With Huberto Ennis.

“The Effect of Employee Stock Options on Bank Investment Choice, Borrowing, and Capital,” Hamid Mehran. UniCredit Group conference, Vienna, Austria, November 6. With Joshua Rosenberg. Also presented at a Brandeis University seminar, Waltham, Massachusetts, December 11.

“The Impact of Tax Law Changes on Bank Conduct and Industry Structure,” Hamid Mehran. Financial Management Association annual meeting, Dallas, Texas, October 11. With Michael Suher. Also presented at the Federal Reserve System Committee Conference on Financial Structure and

Regulation, held at the Federal Reserve Bank of Boston, Boston, Massachusetts, October 29.

“Firms and Flexibility,” Ayşegül Şahin. Universidad Carlos III de Madrid seminar, Madrid, Spain, October 16. With Bart Hobijn.

“Labor Supply in a Fractional Labor Market,” Ayşegül Şahin. Universitat Autònoma de Barcelona seminar, Barcelona, Spain, October 15. With Per Krusell, Toshihiko Mukoyama, and Richard Rogerson. Also presented at a Centro de Estudios Monetarios y Financieros seminar, Madrid, Spain, October 17.

“Dollar Funding Costs in the Summer of '08,” Asani Sarkar. Federal Reserve System Committee Conference on Financial Structure and Regulation, held at the Federal Reserve Bank of Boston, Boston, Massachusetts, October 30.

“Federal Reserve Liquidity Tools,” Asani Sarkar. World Research Group conference, New York City, October 17.

“Credit Risk Transfer and the Financial Crisis,” Til Schuermann. European Central Bank symposium *Benefits and Costs of Securitization*, Frankfurt, Germany, December 10.

“Understanding the Securitization of Subprime Mortgage Credit,” Til Schuermann. International Association of Financial Engineers symposium *Lessons from the Subprime Market: Implosion and Its Consequences*, New York City, November 10. With Adam Ashcraft.

“What Determines Family Structure?” Wilbert van der Klaauw. Boston College seminar, Chestnut Hill, Massachusetts, November 10. ■

Research and Statistics Group Publications and Papers: October-December 2008

Publications are available at www.newyorkfed.org/research/publication_annuals/index.html.

CURRENT ISSUES IN ECONOMICS AND FINANCE, VOL. 14

No. 7, September/October 2008
**Employment in the New York–New
Jersey Region: 2008 Review and Outlook**
Jason Bram, James Orr, and Rae Rosen
Second District Highlights

No. 8, November 2008
**Commodity Price Movements
and PCE Inflation**
Bart Hobijn

No. 9, December 2008
**New Measures of Economic Growth
and Productivity in Upstate New York**
Jaison R. Abel and Richard Deitz
Second District Highlights

STAFF REPORTS

No. 349, October 2008
Liquidity and Congestion
Gara M. Afonso

No. 350, October 2008
Housing Busts and Household Mobility
Fernando Ferreira, Joseph Gyourko,
and Joseph Tracy

No. 351, October 2008
**Aggregation and the PPP Puzzle
in a Sticky-Price Model**
Carlos Carvalho and Fernanda Nechio

No. 352, October 2008
**Systemic Risk and Liquidity
in Payment Systems**
Gara M. Afonso and Hyun Song Shin

No. 353, October 2008
**The Case for TIPS: An Examination
of the Costs and Benefits**
Jennifer Roush, William Dudley,
and Michelle Steinberg Ezer

No. 354, November 2008
The Topology of the Federal Funds Market
Morten L. Bech and Enghin Atalay

No. 355, November 2008
**Imperfectly Credible Disinflation under
Endogenous Time-Dependent Pricing**
Marco Bonomo and Carlos Carvalho

No. 356, November 2008
**Which Bank Is the “Central” Bank?
An Application of Markov Theory to the
Canadian Large-Value Transfer System**
Morten L. Bech, James T. E. Chapman,
and Rod Garratt

No. 357, November 2008
**The Federal Home Loan Bank System:
The Lender of Next-to-Last Resort?**
Adam Ashcraft, Morten L. Bech,
and W. Scott Frame

No. 358, November 2008
Seismic Effects of the Bankruptcy Reform
Donald P. Morgan, Benjamin Iverson,
and Matthew Botsch

No. 359, December 2008
**Rethinking the Measurement of
Household Inflation Expectations:
Preliminary Findings**
Wilbert van der Klaauw, Wändi Bruine
de Bruin, Giorgio Topa, Simon Potter,
and Michael Bryan