Publications and Other Research



Federal Reserve Bank of New York



Research and Statistics Group

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Federal Reserve Bank of New York Research and Statistics Group www.newyorkfed.org/research

February 2011

Policy Review

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The Federal Reserve Bank of New York's Research and Statistics Group produces a wide variety of publications and discussion papers of interest to business and banking professionals, policymakers, academics, and the general public.

This catalogue lists recent issues in our research series:

- the Economic Policy Review

 a policy-oriented journal focusing on
 economic and financial market issues
- *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.

The Research Group also offers two other publications of interest to readers:

- EPR Executive Summaries online versions of selected Economic Policy Review articles, in abridged form
- Research Update

 an online quarterly newsletter providing
 summaries of studies and listings of recent
 publications in our research series.

Members of the Group also publish papers in many economic and finance journals, conference volumes, and scholarly books. A list of these publications begins on page 26.

Economic Policy Review

The *Economic Policy Review* is a policy-oriented research journal that focuses on macroeconomic, banking, and financial market topics.

EPR articles are available at www.newyorkfed.org/research/epr.

Volume 16

No. 1, August 2010 Special Issue: Central Bank Liquidity Tools and Perspectives on Regulatory Reform

Conference Opening Remarks Patricia C. Mosser

Conference Overview and Summary of Proceedings

Matthew Denes, Daniel Greenwald, Nicholas Klagge, Ging Cee Ng, Jeffrey Shrader, Michael Sockin, and John Sporn

Central Bank Liquidity Tools

Central Bank Tools and Liquidity Shortages Stephen G. Cecchetti and Piti Disyatat

Provision of Liquidity through the Primary Credit Facility during the Financial Crisis: A Structural Analysis *Erhan Artuç and Selva Demiralp*

Financial Amplification Mechanisms and the Federal Reserve's Supply of Liquidity during the Financial Crisis *Asani Sarkar and Jeffrey Shrader* Perspectives on Regulatory Reform

Informational Easing: Improving Credit Conditions through the Release of Information *Matthew Pritsker*

Systemic Risk and Deposit Insurance Premiums Viral V. Acharya, João A. C. Santos, and Tanju Yorulmazer

Solving the Present Crisis and Managing the Leverage Cycle John Geanakoplos

No. 2, October 2010

Program Design, Incentives, and Response: Evidence from Educational Interventions

Rajashri Chakrabarti

In an effort to reform K-12 education, policymakers have introduced school vouchers-scholarships that make students eligible to transfer from public to private schools-in some U.S. school districts. This article analyzes two such educational interventions in the United States: the Milwaukee and Florida voucher programs. Under the Milwaukee program, vouchers were imposed from the outset, so that all low-income public school students became eligible for vouchers to transfer to private schools. In contrast, schools in the Florida program were only threatened with vouchers, with students of a particular school becoming eligible for vouchers only if the school received two "F" grades in a period of four years. Unlike the Milwaukee schools, Florida schools therefore had an incentive to avoid vouchers. Using school-level data from Florida and Wisconsin, this study shows that the performance effects of the threatened public schools under the Florida program have exceeded those of corresponding schools in Milwaukee. The lessons of the study are broadly applicable to New York City's educational reform efforts. EPR Executive Summary available

Policy Analysis Using DSGE Models: An Introduction*

Argia M. Sbordone, Andrea Tambalotti, Krishna Rao, and Kieran Walsh

Many central banks have come to rely on dynamic stochastic general equilibrium, or DSGE, models to inform their economic outlook and to help formulate their policy strategies. But while their use is familiar to policymakers and academics, these models are typically not well known outside these circles. This article introduces the basic structure, logic, and application of the DSGE framework to a broader public by providing an example of its use in monetary policy analysis. The authors present and estimate a simple New Keynesian DSGE model, highlighting the core features that this basic specification shares with more elaborate versions. They then apply the estimated model to study the sources of the sudden increase in inflation that occurred in the first half of 2004. One important lesson derived from this exercise is that the management of expectations can be a more effective tool for stabilizing inflation than actual movements in the policy rate. This result is consistent with the increasing focus on the pronouncements of central bankers regarding their future actions.

EPR Executive Summary available

The Introduction of the TMPG Fails Charge for U.S. Treasury Securities

Kenneth D. Garbade, Frank M. Keane, Lorie Logan, Amanda Stokes, and Jennifer Wolgemuth

The TMPG fails charge for U.S. Treasury securities provides that a buyer of Treasury securities can claim monetary compensation from the seller if the seller fails to deliver the securities on a timely basis. The charge was introduced in May 2009 and replaced an existing market convention of simply postponing—without any explicit penalty and at an unchanged invoice price—a seller's obligation to deliver Treasury securities if the seller fails to deliver the securities on a scheduled settlement date. This article explains how a proliferation of settlement fails following the insolvency of Lehman Brothers Holdings Inc. in September 2008 led the Treasury Market Practices Group (TMPG)—a group of market professionals committed to supporting the integrity and efficiency of the U.S. Treasury market—to promote a change in the existing market convention. The change—the introduction of the fails charge—was significant because it mitigated an important dysfunctionality in the secondary market for U.S. Treasury securities and because it stands as an example of the value of cooperation between the public and private sectors in responding to altered market conditions in a flexible, timely, and innovative fashion. **EPR Executive Summary available**

Forthcoming

Central Bank Dollar Swap Lines and Overseas Dollar Funding Costs

Linda S. Goldberg, Craig Kennedy, and Jason Miu

Following a scarcity of dollar funding available internationally to banks and financial institutions, in December 2007 the Federal Reserve began to establish or expand temporary reciprocal currency arrangements with fourteen foreign central banks. The central banks had the capacity to use these swap facilities to provide dollar liquidity to institutions in their jurisdictions. This article describes developments in the dollar swap facilities through the end of 2009. The facilities were a response to dollar funding shortages outside the United States during a period of market dysfunction. Formal research, as well as more descriptive accounts, suggests that the dollar swap lines among central banks were effective at reducing the dollar funding pressures abroad and stresses in money markets. The dollar swap facilities are an important part of the central bank toolbox for managing systemic liquidity disruptions.

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Reports

The Federal Reserve's Commercial Paper Funding Facility

Tobias Adrian, Karin Kimbrough, and Dina Marchioni

The Federal Reserve created the Commercial Paper Funding Facility (CPFF) in the midst of severe disruptions in money markets following the bankruptcy of Lehman Brothers on September 15, 2008. The CPFF finances the purchase of highly rated unsecured and asset-backed commercial paper from eligible issuers through primary dealers. The facility is a liquidity backstop to U.S. issuers of commercial paper, and its creation was part of a range of policy actions undertaken by the Federal Reserve to provide liquidity to the financial system. This article documents aspects of the financial crisis relevant to the creation of the CPFF, reviews the operation of the CPFF, discusses usage of the facility, and draws conclusions for lender-of-lastresort facilities in a market-based financial system.

EPR Executive Summaries

Visit our website for concise summaries of *Economic Policy Review* articles.

Our online publication *EPR Executive Summaries* condenses many of the articles published in the *Review*. Readers will find timely, policy-oriented summaries that are easy to absorb.

The summaries make the technical research of New York Fed economists more accessible to policymakers, educators, business leaders, and others. The series is designed to foster a fuller understanding of our research among those who are in a position to put our ideas and findings to work.

Summaries are available for many articles published since 2002.

www.newyorkfed.org/research/epr/ executive_summary.html

Current Issues in Economics and Finance

Current Issues in Economics and Finance offers concise studies of topical economic and financial issues.

Second District Highlights—a regional supplement to Current Issues—covers important financial and economic developments in the Federal Reserve System's Second District.

Both series are available at www.newyorkfed.org/research/current_issues.

Volume 16

No. 1, January 2010 Is the International Role of the Dollar Changing?*

Linda S. Goldberg

Recently the U.S. dollar's preeminence as an international currency has been questioned. The emergence of the euro, changes in the dollar's value, and the financial market crisis have, in the view of many commentators, posed a significant challenge to the currency's long-standing position in world markets. However, a study of the dollar across critical areas of international trade and finance suggests that the dollar has retained its standing in key roles. While changes in the global status of the dollar are possible, factors such as inertia in currency use, the large size and relative stability of the U.S. economy, and the dollar pricing of oil and other commodities will help perpetuate the dollar's role as the dominant medium for international transactions.

No. 2, February 2010

The Unemployment Gender Gap during the 2007 Recession

Ayşegül Şahin, Joseph Song, and Bart Hobijn

Women fared decidedly better than men during the most recent recession. By August 2009, the unemployment rate for men had hit 11.0 percent, while that for women held at 8.3 percent. This 2.7 percentage point unemployment gender gap the largest in the postwar era—appears to reflect two factors: First, men were much more heavily represented in the industries that suffered the most during the downturn. Second, there was a much sharper increase in the percentage of men who prompted, perhaps, by a decline in household liquidity—rejoined the labor force but failed to find a job.

No. 3, March 2010

Bypassing the Bust: The Stability of Upstate New York's Housing Markets during the Recession*

Jaison R. Abel and Richard Deitz

Over the past decade, the United States has seen real estate activity swing from boom to bust. But upstate New York has been largely insulated from this volatility, with metropolitan areas such as Buffalo, Rochester, and Syracuse even registering home price increases during the recession. An analysis of upstate housing markets over the most recent residential real estate cycle indicates that the region's relatively low incidence of nonprime mortgages and the better-than-average performance of these loans contributed to this stability. Second District Highlights

No. 4, April 2010

The Federal Reserve's Foreign Exchange Swap Lines*

Michael J. Fleming and Nicholas J. Klagge

The financial crisis that began in August 2007 disrupted U.S. dollar funding markets not only in the United States but also overseas. To address funding pressures internationally, the Federal Reserve introduced a system of reciprocal currency arrangements, or "swap lines," with other central banks. The swap line program, which ended early this year, enhanced the ability of these central banks to provide U.S. dollar funding to financial institutions in their jurisdictions.

No. 5, May 2010

The Homeownership Gap* Andrew F. Haughwout, Richard Peach,

and Joseph Tracy

Recent years have seen a sharp rise in the number of negative equity homeowners—those who owe more on their mortgages than their houses are worth. These homeowners are included in the official homeownership rate computed by the Census Bureau, but the savings they must amass to retain their home or purchase a new home are daunting. Recognizing that these homeowners are likely to convert to renters over time, the authors of this analysis calculate an "effective" rate of homeownership that excludes negative equity households. They argue that the effective rate—5.6 percentage points below the official rate—may be a useful guide to the future path of the official rate.

No. 6, June/July 2010

The Recession's Impact on the State Budgets of New York and New Jersey

Richard Deitz, Andrew F. Haughwout, and Charles Steindel

In the wake of the most recent U.S. recession, both New York State and New Jersey have faced multibillion-dollar budget gaps. An analysis of the makeup of their budgets reveals that the states' heavy reliance on personal income taxes particularly from high-wage earners in the finance sector—has exacerbated revenue shortfalls. To close their budget gaps, New York and New Jersey have had to make difficult choices about tax increases and service cuts. In the future, the states might take steps to avert such budget quandaries by establishing "rainy day" funds or restructuring taxes to make them less sensitive to the business cycle. **Second District Highlights**

No. 7, August/September 2010

Improving Survey Measures of Household Inflation Expectations

Wändi Bruine de Bruin, Simon Potter, Robert Rich, Giorgio Topa, and Wilbert van der Klaauw

Expectations about future inflation are generally thought to play an important role in households' decisions about spending and saving. They are also of great interest to central bankers, who take them into account when determining policy or assessing the effectiveness of communications with the public. To help improve existing survey measures of inflation expectations, the Federal Reserve Bank of New York recently joined with other institutions and academic consultants to develop a set of survey questions that will yield more reliable information on households' inflation expectations, inflation uncertainty, and expectations about future wage changes.

No. 8, December 2010

Why Is the Market Share of Adjustable-Rate Mortgages So Low?

Emanuel Moench, James Vickery, and Diego Aragon

Over the past several years, U.S. homebuyers have increasingly favored fixed-rate mortgages over adjustable-rate mortgages (ARMs). Indeed, ARMs have dropped to less than 10 percent of all residential mortgage originations, a near-record low. One might speculate that the decline in the ARM share has been driven by "one-off" factors relating to the financial crisis. However, a statistical analysis suggests that recent trends can largely be explained by the same factors that have historically shaped mortgage choice-most notably, the term structure of interest rates and its effects on the relative price of different types of mortgages. Supply-side factors, in particular a rise in the share of mortgages eligible to be securitized by the housing government-sponsored enterprises, also play a role in the low current ARM share.

Introduction

Staff Reports

Research Update

Research Update is an online quarterly newsletter designed to keep you informed about the Research Group's current work. The newsletter—which complements this catalogue—offers summaries of selected studies and listings of recent articles and papers in our research series.

Research Update also reports on other news within the Group, including:

- staff publication in outside journals,
- presentations by economists at academic conferences and industry gatherings,
- upcoming conferences at the Federal Reserve Bank of New York,
- calls for papers, and
- new publications and services.

The publication is available at www.newyorfed.org/research/research_update.

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Staff Reports

The *Staff Reports* series features technical research papers designed to stimulate discussion and elicit comments. These papers are intended for eventual publication in leading economic and finance journals.

The series is available only at www.newyorkfed.org/research/staff_reports.

Macroeconomics and Growth

No. 421, January 2010 Monetary Cycles, Financial Cycles, and the Business Cycle*

Tobias Adrian, Arturo Estrella, and Hyun Song Shin

One of the most robust stylized facts in macroeconomics is the forecasting power of the term spread for future real activity. The economic rationale for this forecasting power usually appeals to expectations of future interest rates, which affect the slope of the term structure. This paper proposes a possible causal mechanism for the forecasting power of the term spread, deriving from the balance sheet management of financial intermediaries. When monetary tightening is associated with a flattening of the term spread, it reduces net interest margin, which in turn makes lending less profitable, leading to a contraction in the supply of credit. The authors provide empirical support for this hypothesis, thereby linking monetary cycles, financial cycles, and the business cycle.

No. 422, January 2010 Financial Intermediation, Asset Prices, and Macroeconomic Dynamics

Tobias Adrian, Emanuel Moench, and Hyun Song Shin

Fluctuations in the aggregate balance sheets of financial intermediaries provide a window on the joint determination of asset prices and macroeconomic aggregates. The authors document that financial intermediary balance sheets contain strong predictive power for future excess returns on a broad set of equity, corporate, and Treasury bond

*A top download in 2010.

portfolios. They also show that the same intermediary variables that predict excess returns forecast real economic activity and various measures of inflation. The study's findings point to the importance of financing frictions in macroeconomic dynamics and provide quantitative guidance for preemptive macroprudential and monetary policies.

No. 423, January 2010

The Federal Reserve's Commercial Paper Funding Facility

Tobias Adrian, Karin Kimbrough, and Dina Marchioni

The Federal Reserve created the Commercial Paper Funding Facility (CPFF) in the midst of severe disruptions in money markets following the bankruptcy of Lehman Brothers on September 15, 2008. The CPFF finances the purchase of highly rated unsecured and asset-backed commercial paper from eligible issuers via primary dealers. The facility is a liquidity backstop to U.S. issuers of commercial paper, and its creation was part of a range of policy actions undertaken by the Federal Reserve to provide liquidity to the financial system. This paper describes aspects of the financial crisis relevant to the creation of the CPFF, reviews the operation of the CPFF, discusses use of the facility, and draws conclusions for lender-of-last-resort facilities in a market-based financial system.

No. 425, January 2010

The Measurement of Rent Inflation

Jonathan McCarthy and Richard W. Peach

Shelter has a large weight in the CPI and in the personal consumption expenditures deflator, resulting in substantial scrutiny of how tenant rent and owners' equivalent rent are measured in these price indexes. This study describes how the Bureau of Labor Statistics (BLS) estimates tenant rent and owners' equivalent rent. McCarthy and Peach then estimate alternative inflation rates for tenant rent and owners' equivalent rent based on American Housing Survey data, following BLS methodology as closely as possible. Their alternative tenant rent inflation series is generally consistent with the corresponding BLS series. However, their alternative owners' equivalent rent inflation series is consistently lower than the corresponding BLS series by an amount large enough to have a

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significant effect on the overall inflation rate. This result is driven by the inverse relationship between rent inflation and the level of monthly housing cost evident in the American Housing Survey data.

No. 428, January 2010

Macro Risk Premium and Intermediary Balance Sheet Quantities

Tobias Adrian, Emanuel Moench, and Hyun Song Shin

The macro risk premium measures the threshold return for real activity that receives funding from savers. This paper bases its argument on the relationship between the macro risk premium and the growth of financial intermediaries' balance sheets. The spare capacity of their balance sheets determines the intermediaries' risk appetite, which in turn determines the real projects that receive funding and, hence, the supply of credit. Monetary policy affects risk appetite by changing the ability of intermediaries to leverage their capital. The authors estimate the time-varying risk appetite of financial intermediaries for the United States, Germany, the United Kingdom, and Japan, and study the joint dynamics of risk appetite using macroeconomic aggregates for the United States. They argue that risk appetite is an important indicator of monetary conditions.

No. 433, February 2010

The Paradox of Toil*

Gauti Eggertsson

This paper proposes a new paradox: the paradox of toil. Suppose everyone wakes up one day and decides they want to work more. What happens to aggregate employment? Eggertsson shows that, under certain conditions, aggregate employment falls; that is, there is less work in the aggregate because everyone wants to work more. The conditions for the paradox to apply are that the short-term nominal interest rate is zero and there are deflationary pressures and output contraction, much as during the Great Depression in the United States and, perhaps, the 2008 financial crisis in large parts of the world. The paradox of toil is tightly connected to the Keynesian idea of the paradox of thrift. Both are examples of a *fallacy* of composition.

No. 434, February 2010 Correlated Disturbances and U.S. Business Cycles

Vasco Cúrdia and Ricardo Reis

The dynamic stochastic general equilibrium (DSGE) models used to study business cycles typically assume that exogenous disturbances are independent first-order autoregressions. This paper relaxes this tight and arbitrary restriction by allowing for disturbances that have a rich contemporaneous and dynamic correlation structure. The authors' first contribution is a new Bayesian econometric method that uses conjugate conditionals to allow for feasible and quick estimation of DSGE models with correlated disturbances. Their second contribution is a reexamination of U.S. business cycles. They find that allowing for correlated disturbances resolves some conflicts between estimates from DSGE models and those from vector autoregressions and that a key missing ingredient in the models is countercyclical fiscal policy. According to the authors' estimates, government spending and technology disturbances play a larger role in the business cycle than previously ascribed, while changes in markups are less important.

No. 435, February 2010

Labor-Dependent Capital Income Taxation that Encourages Work and Saving

Sagiri Kitao

Kitao proposes a simple mechanism of capital taxation that is negatively correlated with labor supply. Using a life-cycle model of heterogeneous agents, she shows that this tax scheme provides a strong work incentive when households possess large assets and high productivity later in the life cycle, when they would otherwise work less. This reformed system also adds to the saving motive and raises aggregate capital. Moreover, the increased economic activities expand the tax base, and the revenue-neutral reform results in a lower average tax rate. The paper's findings show that this tax scheme improves long-run welfare and that the majority of current generations would experience a welfare gain from a transition to the reformed system.

No. 436, March 2010

Social Security, Benefit Claiming, and Labor Force Participation: A Quantitative General Equilibrium Approach

Selahattin İmrohoroğlu and Sagiri Kitao

Îmrohoroğlu and Kitao use a general equilibrium model of overlapping generations that incorporates endogenous saving, labor force participation, work hours, and Social Security benefit claims to study the impact of three Social Security reforms: 1) a reduction in benefits and payroll taxes; 2) an increase in the earliest retirement age, to sixty-four from sixty-two; and 3) an increase in the normal retirement age, to sixty-eight from sixty-six. They find that a 50 percent cut in the scope of the current system significantly raises asset holdings and the labor input, primarily through higher participation of older workers, and reduces the shortfall of the Social Security budget through a reduction in early claiming. Increasing the normal retirement age also raises saving and the labor supply, but the effects are smaller. Postponing the earliest retirement age has only a negligible effect.

No. 442, April 2010

Short-Run Fiscal Policy: Welfare, Redistribution, and Aggregate Effects in the Short and Long Run

Sagiri Kitao

This paper quantifies the effects of two shortrun fiscal policies—a temporary tax cut and a temporary rebate transfer—that are intended to stimulate economic activity. A reduction in income taxation provides immediate incentives to work and save more, raising aggregate output and consumption. A temporary rebate is mostly saved and increases consumption marginally. Both policies improve the overall welfare of households, and the rebate policy especially benefits low-income households. In the long run, however, the debt accumulated to finance the stimulus and a higher tax to service the debt can crowd out capital and reduce output and consumption, causing welfare to deteriorate.

No. 443, April 2010

The Effect of Question Wording on Reported Expectations and Perceptions of Inflation *Wändi Bruine de Bruin, Wilbert van der Klaauw,*

Julie S. Downs, Baruch Fischhoff, Giorgio Topa, and Olivier Armantier

Public expectations and perceptions of inflation may affect economic decisions, and have subsequent effects on actual inflation. Therefore, survey measures of such expectations can be of great importance. The authors use an Internetbased survey of consumers and randomly assign respondents to questions about "prices in general" as well as the "rate of inflation" and "prices you pay." Reported expectations and perceptions were higher and more dispersed for "prices in general" than for the "rate of inflation," with "prices you pay" and "prices in general" showing similar response patterns. Compared with questions about the "rate of inflation," questions about "prices in general" and "prices you pay" focused respondents relatively more on personal price experiencesand elicited expectations that were more strongly correlated with the expected price increases for food and transportation, which were relatively large and likely salient, but not with the expected price increases for housing, which were relatively small and likely less salient. The results have implications for survey measures of inflation expectations.

No. 451, May 2010

Subsidizing Job Creation in the Great Recession

Sagiri Kitao, Ayşegül Şahin, and Joseph Song

The authors analyze the effects of various labor market policies on job creation, job destruction, and employment. The framework of Mortensen and Pissarides (2003) is used to model the dynamic interaction between firms and workers and to simulate their responses to alternative policies. The equilibrium model is calibrated to capture labor market conditions at the end of 2009, including the unemployment, inflow, and outflow rates by workers of different educational attainment. They consider the equilibrium effects of a hiring subsidy,

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a payroll tax reduction, and an employment subsidy. While calibrating parameters that characterize these policies, the authors try to mimic the policies in the Hiring Incentives to Restore Employment (HIRE) Act of 2010. They find that a hiring subsidy and a payroll tax deduction, as in the HIRE Act, can stimulate job creation in the short term, but can cause a higher equilibrium unemployment rate in the long term. Employment subsidies succeed in lowering the unemployment rate permanently, but the policy entails high fiscal costs.

No. 455, June 2010

State-Dependent Pricing under Infrequent Information: A Unified Framework

Marco Bonomo, Carlos Carvalho, and René Garcia

Bonomo, Carvalho, and Garcia characterize optimal state-dependent pricing rules under various forms of infrequent information. In all models, infrequent price changes arise from the existence of a lump-sum "menu cost." The authors entertain various alternatives for the source and nature of infrequent information, and show that, in all cases, optimal pricing rules are both time- and statedependent, characterized by "trigger strategies" that depend on the time elapsed since the last date when information was fully factored into the pricing decision. After considering the case in which information arrives infrequently for exogenous reasons, they address pricing problems in which gathering and processing information also entails a lump-sum cost. When the information and adjustment costs must be incurred simultaneously, the optimal pricing policy is a fixed-price time-dependent rule. When the costs are dissociated, the optimal rule features price

stickiness and inattentiveness. Finally, the authors consider versions of the price-setting problems in which firms continuously entertain partial information. They characterize the optimal pricing rules and provide numerical solution algorithms and examples in a unified framework.

No. 463, July 2010

The Central Bank Balance Sheet as an Instrument of Monetary Policy

Vasco Cúrdia and Michael Woodford

Cúrdia and Woodford first extend a standard New Keynesian model to allow a role for the central bank's balance sheet in equilibrium determination and then consider the connections between these alternative policy dimensions and traditional interest rate policy. They distinguish between "quantitative easing" in the strict sense and targeted asset purchases by a central bank, arguing that, according to their model, while the former is likely to be ineffective at all times, the latter can be effective when financial markets are sufficiently disrupted. Neither is a perfect substitute for conventional interest rate policy, but purchases of illiquid assets are particularly likely to improve welfare when the zero lower bound on the policy rate is reached. The authors also consider optimal policy with regard to the payment of interest on reserves; in their model, this requires that the interest rate on reserves be kept near the target for the policy rate at all times.

No. 467, August 2010

Tax Buyouts Marco Del Negro, Fabrizio Perri, and Fabiano Schivardi

The paper studies a fiscal policy instrument that can reduce fiscal distortions, without affecting revenues, in a politically viable way. The instrument is a private contract (tax buyout), offered by the government to each individual citizen, whereby the citizen can choose to pay a fixed price up front in exchange for a given reduction in her tax rate for a prespecified period of time. The authors consider a dynamic overlapping-generations economy, calibrated to match several features of the U.S. income and wealth distribution, and show that, under simple pricing, the introduction of the buyout is revenue neutral and at the same time can benefit a significant fraction of the population and lead to sizable increases in labor supply, income, consumption, and welfare.

No. 479, November 2010

An Introduction to the FRBNY Consumer Credit Panel

Donghoon Lee and Wilbert van der Klaauw

This paper introduces the FRBNY Consumer Credit Panel, a new longitudinal database with detailed information on consumer debt and credit. The panel uses a unique sample design and information derived from consumer credit reports to track individuals' and households' access to and use of credit at a quarterly frequency. In any given quarter ranging from the first quarter of 1999 to the present, the panel can be used to compute nationally representative estimates of the levels and changes in various aspects of individual and household liabilities. In addition to describing the sample design, the use of sample weights, and the credit report information included in the database, the authors provide some comparisons of population statistics and consumer debt estimates derived from their panel with those based on data from the American Community Survey and the Flow of Funds Accounts of the United States.

International

No. 430, February 2010

Loss Aversion, Asymmetric Market Comovements, and the Home Bias

Kevin Amonlirdviman and Carlos Carvalho

The different utility impact of wealth gains and losses leads loss-averse investors to behave similarly to investors with high risk aversion. So should these agents not perceive larger gains from international diversification than standard expected-utility preference agents with plausible levels of risk aversion? They might not, because comovements in international stock markets are asymmetric: Correlations are higher in market downturns than in upturns. This asymmetry dampens the gains from diversification relatively more for loss-averse investors. Amonlirdviman and Carvalho analyze the portfolio problem of such an investor who has to choose between home and foreign equities in the presence of asymmetric comovement in returns. Perhaps surprisingly, in the context of the home bias puzzle they find that the loss-averse investors behave similarly to those with standard expected-utility preferences and plausible levels of risk aversion.

No. 461, July 2010

Financial Amplification of Foreign Exchange Risk Premia

Tobias Adrian, Erkko Etula, and Jan J. J. Groen

Theories of systemic risk suggest that financial intermediaries' balance sheet constraints amplify fundamental shocks. Adrian, Etula, and Groen provide supporting evidence for such theories by decomposing the U.S. dollar risk premium into components associated with macroeconomic fundamentals and a component associated with financial intermediaries' balance sheets. Relative to the benchmark model with only macroeconomic state variables, balance sheets amplify the U.S. dollar risk premium. The authors discuss applications to systemic risk monitoring.

No. 474, September 2010

Firm Value and Cross-Listings: The Impact of Stock Market Prestige

Nicola Cetorelli and Stavros Peristiani

This study investigates the valuation impact of a firm's decision to cross-list on a more (or less) prestigious stock exchange relative to its own domestic market. Cetorelli and Peristiani use network analysis to derive broad market-based measures of prestige for forty-five country or regional stock exchange destinations between 1990 and 2006. They find that firms cross-listing in a more prestigious market enjoy significant valuation gains over the five-year period following the listing. The authors also document a reverse effect for firms cross-listing in less prestigious markets: These firms experience a significant decline in valuation over the five years following the listing. The reputation of the crossborder-listing destinations is therefore a useful signal of a firm's value going forward. The study's findings are consistent with the view that crosslisting in a prestigious market enhances a firm's visibility, strengthens corporate governance, and lowers informational frictions and capital costs.

Microeconomics

No. 432, February 2010

Subprime Mortgage Lending in New York City: Prevalence and Performance

Ebiere Okah and James Orr

Subprime mortgage lending expanded in New York City between 2004 and mid-2007, and delinquencies on these subprime loans have been rising sharply. This study uses a rich, loan-level data set of the city's outstanding subprime loans as of January 2009 to describe the main features of this lending and to model the performance of these loans. These subprime loans represent a smaller share of total housing units in the city than is true nationwide. In addition, they are found to be clustered in neighborhoods where average borrower credit quality is low and, unlike prime mortgage loans, where African Americans and Hispanics constitute relatively large shares of the population. The authors estimate a model of the likelihood that these loans will become seriously delinquent and find a significant role for credit quality of borrowers, debt-toincome and loan-to-value ratios at the time of loan origination, and estimates of the loss of home equity.

No. 440, March 2010 Productivity and the Density of Human Capital

Jaison R. Abel, Ishita Dey, and Todd M. Gabe

Abel, Dey, and Gabe estimate a model of urban productivity in which the agglomeration effect of density is enhanced by a metropolitan area's stock of human capital. Estimation accounts for potential biases due to the endogeneity of density and industrial composition effects. Using new information on output per worker for U.S. metropolitan areas along with a measure of density that accounts for the spatial distribution of population, the authors find that a doubling of density increases productivity by 2 to 4 percent. Consistent with theories of learning and knowledge spillovers in cities, they demonstrate that the elasticity of average labor productivity with respect to density increases with human capital. Metropolitan areas with a human capital stock one standard deviation below the mean realize no productivity gain, while doubling density in metropolitan areas with a human capital stock one standard deviation above the mean yields productivity benefits that are about twice the average.

No. 450, May 2010

Is Economics Coursework, or Majoring in Economics, Associated with Different Civic Behaviors?*

Sam Allgood, William Bosshardt, Wilbert van der Klaauw, and Michael Watts

Using data collected from students who attended one of four public universities, the authors investigate the relationship between economics coursework and civic behavior after graduation. They find that undergraduate coursework in economics is strongly associated with political party affiliation and with donations to candidates or parties, but not with the decision to vote or not vote. Nor is studying economics correlated with the likelihood (or intensity) of volunteerism. While the authors find that the civic behavior of economics majors and business majors is similar, it appears that business majors are less likely than general majors to engage in time-consuming behaviors such as voting and volunteering. Finally, the authors extend earlier studies that address the link between economics coursework and attitudes on public policy issues, finding that graduates who studied

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Outside Journals more economics usually reported attitudes closer to those expressed in national surveys of U.S. economists. Interestingly, the authors find the public policy attitudes of business majors to be more like those of general majors than of economics majors.

No. 453, June 2010

Bayesian Social Learning, Conformity, and Stubbornness: Evidence from the AP Top 25

Daniel F. Stone and Basit Zafar

The recent nonexperimental literature on social learning focuses on showing that observational learning exists-that is, individuals do indeed draw inferences by observing the actions of others. Stone and Zafar take this literature a step further by analyzing whether individuals are Bayesian social learners. Using data from the Associated Press (AP) U.S. College Football Poll, a weekly subjective ranking of the top twenty-five teams, they find that peer rankings: 1) are informative, as conditioning on them improves the accuracy of their estimated Bayesian posterior rankings in a nontrivial way; and 2) influence the way voters adjust their rankings, but the influence is less than the Bayesian amount. Voters' revisions are closer to Bayesian when the ranked team loses than when it wins, which the authors attribute to losses being less ambiguous and more salient signals. They find evidence of significant voter heterogeneity, and that voters are less responsive to peer rankings after they have been on the poll a few years.

No. 454, June 2010

Can Subjective Expectations Data Be Used in Choice Models? Evidence on Cognitive Biases *Basit Zafar*

This paper examines the extent to which cognitive biases plague subjective data, specifically addressing: 1) whether cognitive dissonance affects the reporting of beliefs; and 2) whether individuals exert sufficient mental effort when probed about their subjective beliefs. Using a unique panel data set of undergraduates that contains their subjective expectations about outcomes specific to different majors in their choice set, Zafar finds no evidence of cognitive biases systematically affecting the reporting of beliefs: By analyzing patterns of belief updating, he rules out cognitive dissonance being a serious concern in the current setting. Moreover, there seems to be no systematic (nonclassical) measurement error in the reporting of beliefs. In the reported beliefs for the various majors, Zafar finds no systematic patterns in mental recall of previous responses or in the extent of rounding. Comparison of subjective beliefs with objective measures suggests that students have well-formed expectations. Overall, the results paint a favorable picture of the use of subjective expectations data in choice models.

No. 456, June 2010

Executive Compensation and Risk Taking

Patrick Bolton, Hamid Mehran, and Joel Shapiro

This paper studies the connection between risk taking and executive compensation in financial institutions. A theoretical model of shareholders, debtholders, depositors, and an executive suggests that: 1) in principle, excessive risk taking (in the form of risk shifting) may be addressed by basing compensation both on stock price and the price of debt (proxied by the credit default swap spread); but 2) shareholders may be unable to commit to designing compensation contracts in this way and indeed may not want to because of distortions introduced either by deposit insurance or naive debtholders. The paper provides an empirical analysis suggesting that debt-like compensation for executives is believed by the market to reduce risk for financial institutions.

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No. 458, July 2010

Shadow Banking*

Zoltan Pozsar, Tobias Adrian, Adam Ashcraft, and Hayley Boesky

Shadow banks are financial intermediaries that conduct maturity, credit, and liquidity transformation without access to central bank liquidity or public sector credit guarantees. The authors document that the shadow banking system became severely strained during the financial crisis because, like traditional banks, shadow banks conduct credit, maturity, and liquidity transformation, but unlike traditional financial intermediaries, they lack access to public sources of liquidity, such as the Federal Reserve's discount window, or public sources of insurance, such as federal deposit insurance. The Federal Reserve's liquidity facilities and other government agencies' guarantee schemes were a direct response to the liquidity and capital shortfalls of shadow banks and, effectively, provided either a backstop to credit intermediation by the shadow banking system or to traditional banks for the exposure to shadow banks. The paper describes the institutional features of shadow banks, discusses their economic roles, and analyzes their relation to the traditional banking system.

No. 462, July 2010

The Impact of Competition on Technology Adoption: An Apples-to-PCs Analysis

Adam Copeland and Adam Hale Shapiro

The authors study the effect of market structure on a personal computer manufacturer's decision to adopt new technology. This industry is unusual because there exist two horizontally segmented retail markets with different degrees of competition: the IBM-compatible (or PC) platform and the Apple platform. The paper first documents that, relative to Apple, producers of PCs typically have more frequent technology adoption, shorter product cycles, and steeper price declines over the product cycle. It then develops a parsimonious vintage-capital model that matches the prices and sales of PC and Apple products. The model predicts that competition is the key driver of the rate at which technology is adopted.

No. 468, August 2010

TBA Trading and Liquidity in the Agency MBS Market

James Vickery and Joshua Wright

Most mortgages in the United States are securitized through the agency mortgage-backed-securities (MBS) market. These securities are generally traded on a "to-be-announced," or TBA, basis. This trading convention significantly improves agency MBS liquidity, leading to lower borrowing costs for households. Evaluation of potential reforms to the U.S. housing finance system should take into account the effects of those reforms on the operation of the TBA market.



No. 470, September 2010

Knowledge in Cities

Todd Gabe, Jaison R. Abel, Adrienne Ross, and Kevin Stolarick

This study identifies clusters of U.S. and Canadian metropolitan areas with similar knowledge traits. These groups-ranging from Making Regions, characterized by knowledge about manufacturing, to Thinking Regions, noted for knowledge about the arts, humanities, information technology, and commerce—can be used by analysts and policymakers for the purposes of regional benchmarking or comparing the types of programs and infrastructure available to support closely related economic activities. In addition, these knowledge-based clusters help explain the types of regions that have levels of economic development that exceed, or fall short of, those of other places with similar amounts of college attainment. Regression results show that Engineering, Enterprising, and Building Regions are associated with higher levels of productivity and earnings per capita, while Teaching, Understanding, Working, and Comforting Regions have lower levels of economic development.

No. 471, September 2010

Effect of Constraints on Tiebout Competition: Evidence from the Michigan School Finance Reform

Rajashri Chakrabarti and Joydeep Roy

Using data from Michigan, which enacted a comprehensive school finance reform in 1994 that ended local discretion over school spending, Chakrabarti and Roy study the implications of imposing limits on local government control over the quality of local public goods. They find that the reform was successful in overturning existing trends toward increased disparities. However, it also constrained the highest spending districts and was associated with negative effects on subsequent educational outcomes. These results survive several sensitivity checks. Looking at whether the reform affected incentives and responses, the authors find that loss of discretion appeared to act as a strong disincentive to high-spending districts and, more generally, across the board. The performance improvements of the lowest spending districts were likely related to relative increases in spending rather than greater effort. This same finding is corroborated by results from an alternative strategy, which exploits differences in the nature of incentives faced by districts in more competitive areas versus those in less competitive areas.

No. 472, September 2010

Do Charter Schools Crowd Out Private School Enrollment? Evidence from Michigan

Rajashri Chakrabarti and Joydeep Roy

Although there have been numerous studies on the effects of charter schools, these studies have mostly been confined to analyzing the effects on student achievement, student demographic composition, parental satisfaction, and the competitive effects on regular public schools. This study departs from the existing literature by investigating the effect of charter schools on enrollment in private schools. To investigate this issue empirically, Chakrabarti and Roy focus on Michigan, where there was a significant spread of charter schools in the 1990s. Using data on private school enrollment and using a fixed-effects as well as instrumental-variables strategy that exploits exogenous variation from Michigan charter law, they investigate the effect of charter school penetration on private school enrollment. The authors find some evidence of a decline in enrollment in private schools-but the effect is only modest in size. This finding is reasonably robust, and survives several robustness checks.

Economic Policy Review

No. 478, September 2010

Double Majors: One for Me, One for the Parents? *Basit Zafar*

This paper investigates how students decide on the composition of their paired majors-that is, whether the majors are substitutes or complements. Zafar collects innovative data on subjective expectations from a sample of Northwestern University sophomores and incorporates it in a choice model of double majors that also captures the notion of specialization. He finds that enjoying the coursework and gaining the approval of parents are the most important determinants in the choice of majors. The model's estimates reject the hypothesis that students major in one field to pursue their own interests and in another for their parents' approval. Instead, Zafar finds that gaining parental approval and enjoying a field of study both academically and professionally are outcomes that students feel are important for both majors. However, the author does find that students act strategically in choosing their majors, selecting two that differ in their chances of completion and difficulty and in finding a job upon graduation.

No. 480, December 2010

The Financial Crisis at the Kitchen Table: Trends in Household Debt and Credit

Meta Brown, Andrew Haughwout, Donghoon Lee, and Wilbert van der Klaauw

The Federal Reserve Bank of New York Consumer Credit Panel, created from a sample of U.S. consumer credit reports, is an ongoing panel of quarterly data on individual and household debt. The panel shows a substantial run-up in total consumer indebtedness between the first quarter of 1999 and the peak in the third quarter of 2008, followed by a steady decline through the third quarter of 2010. During the same period, delinquencies rose sharply: Delinquent balances peaked at the close of 2009 and then began to decline again. This paper describes these trends and discusses their sources. It focuses particularly on the decline in debt outstanding since mid-2008, which has been the subject of considerable policy and media interest. While the magnitudes of balance declines and borrower defaults, represented as

"charge-offs" on consumers' credit reports, have been similar, the authors find that debt pay-down has been more pronounced than this simple comparison might indicate.

Banking and Finance

No. 424, January 2010

Policy Perspectives on OTC Derivatives Market Infrastructure*

Darrell Duffie, Ada Li, and Theo Lubke

In the wake of the recent financial crisis, over-thecounter (OTC) derivatives have been blamed for increasing systemic risk. Although OTC derivatives were not a central cause of the crisis, the complexity and limited transparency of the market reinforced the potential for excessive risk taking, as regulators did not have a clear view into how OTC derivatives were being used. This paper discusses how the New York Fed and other regulators could improve weaknesses in the OTC derivatives market through stronger oversight and better regulatory incentives for infrastructure improvements to reduce counterparty credit risk and bolster market liquidity, efficiency, and transparency. Used responsibly with these reforms, over-the-counter derivatives can provide important risk management and liquidity benefits to the financial system.

No. 426, January 2010

Repo Market Effects of the Term Securities Lending Facility

Michael J. Fleming, Warren B. Hrung, and Frank M. Keane

The Term Securities Lending Facility (TSLF) was introduced by the Federal Reserve to promote liquidity in the financing markets for Treasury and other collateral. The authors evaluate one aspect of the program—the extent to which it has narrowed repo spreads between Treasury collateral and less liquid collateral. They find that TSLF operations have precipitated a significant narrowing of repo spreads. More refined tests indicate the market conditions and types of operations associated with the program's effectiveness. Various additional tests, including a split-sample test, suggest that the authors' findings are robust.

No. 427, January 2010 Performance Maximization of Actively Managed Funds

Paolo Guasoni, Gur Huberman, and Zhenyu Wang

Ratios that indicate the statistical significance of a fund's alpha typically appraise its performance. A growing literature suggests that even in the absence of any ability to predict returns, holding options positions on the benchmark assets or trading frequently can significantly enhance performance ratios. This paper derives the performancemaximizing strategy-a variant of buy-writeand the least upper bound on such performance enhancement, thereby showing that if common equity indexes are used as benchmarks, the potential performance enhancement from trading frequently is usually negligible. The enhancement from holding options can be substantial if the implied volatilities of the options are higher than the volatilities of the benchmark returns.

No. 429, January 2010 Central Bank Dollar Swap Lines and Overseas Dollar Funding Costs

Linda S. Goldberg, Craig Kennedy, and Jason Miu

Following a scarcity of dollar funding available internationally to banks and financial institutions, in December 2007 the Federal Reserve began to establish or expand Temporary Reciprocal Currency Arrangements with fourteen foreign central banks. These central banks had the capacity to use these swap facilities to provide dollar liquidity to institutions in their jurisdictions. This paper presents the developments in the dollar swap facilities through the end of 2009. The facilities were a response to dollar funding shortages outside the United States during a period of market dysfunction. Formal research, as well as more descriptive accounts, suggests that the dollar swap lines among central banks were effective at reducing the dollar funding pressures abroad and stresses in money markets. The central bank dollar swap facilities are an important part of the toolbox for dealing with systemic liquidity disruptions.

No. 431, February 2010

Financial Amplification Mechanisms and the Federal Reserve's Supply of Liquidity during the Crisis

Asani Sarkar and Jeffrey Shrader

The small decline in the value of mortgage-related assets relative to the large total losses associated with the financial crisis suggests the presence of financial amplification mechanisms, which allow relatively small shocks to propagate through the financial system. Sarkar and Shrader review the literature on financial amplification mechanisms and discuss the Federal Reserve's interventions during different stages of the crisis in light of this literature. They interpret the Fed's early-stage liquidity programs as working to dampen balance sheet amplifications arising from the positive feedback between financial constraints and asset prices. By comparison, the Fed's later-stage crisis programs take into account adverse-selection amplifications that operate via increases in credit risk and the externality imposed by risky borrowers on safe ones. Finally, the authors provide new empirical evidence that increases in the Federal Reserve's liquidity supply reduce interest rates during periods of high liquidity risk. Their analysis has implications for the impact on market prices of a potential withdrawal of liquidity supply by the Fed.

No. 437, March 2010

Stressed, Not Frozen: The Federal Funds Market in the Financial Crisis

Gara Afonso, Anna Kovner, and Antoinette Schoar

This paper examines the impact of the financial crisis of 2008, specifically the bankruptcy of Lehman Brothers, on the federal funds market. The authors find that amounts and spreads became more sensitive to a borrowing bank's characteristics, lending rates increased, and banks became more restrictive in their choice of counterparties. The market did not seem to expand to meet the increased demand predicted by the drop in other bank funding markets. Afonso, Kovner, and Schoar examine discount window borrowing as a proxy for unmet fed funds demand and find that the fed funds market is not indiscriminate. As expected, borrowers who access the discount window have a lower return on assets. On the lender side, the characteristics of the lending bank do not seem to significantly affect the amount of interbank loans it makes. In particular, the authors do not find that worse-performing banks began hoarding liquidity and indiscriminately reducing their lending.

No. 438, March 2010

Liquidity-Saving Mechanisms in Collateral-Based RTGS Payment Systems

Marius Jurgilas and Antoine Martin

This paper studies banks' incentives for choosing the timing of their payment submissions in a collateral-based real-time gross settlement payment system and the way in which these incentives change with the introduction of a liquidity-saving mechanism (LSM). The authors show that an LSM allows banks to economize on collateral while also providing incentives to submit payments earlier. The reason is that, in their model, an LSM allows payments to be matched and offset, helping to settle payment cycles in which each bank must receive a payment that provides sufficient funds to allow the settlement of its own payment. In contrast to fee-based systems-for which Martin and McAndrews (2008a) show that introducing an LSM can lead to lower welfare—in Jurgilas and Martin's model, welfare is always higher with an LSM in a collateral-based system.

No. 439, March 2010

The Changing Nature of Financial Intermediation and the Financial Crisis of 2007-09*

Tobias Adrian and Hyun Song Shin

The financial crisis of 2007-09 highlighted the changing role of financial institutions and the growing importance of the "shadow banking system," which grew out of the securitization of assets and the integration of banking with capital market developments. This trend was most pronounced in the United States, but it also had a profound influence on the global financial system as a whole. In a market-based financial system, banking and capital market developments are inseparable, and funding conditions are tied closely to fluctuations in the leverage of market-based financial intermediaries. Balance sheet growth of market-based financial intermediaries provides a window on liquidity by indicating the availability of credit, while contractions of balance sheets have tended to precede the onset of financial crises. This study describes the changing nature of financial intermediation in the market-based financial system, charts the course of the recent financial crisis, and outlines the policy responses that have been implemented by the Federal Reserve and other central banks.

No. 441, March 2010 Large-Scale Asset Purchases by the Federal Reserve: Did They Work?*

Joseph Gagnon, Matthew Raskin, Julie Remache, and Brian Sack

Since December 2008, the Federal Reserve's traditional policy instrument, the target federal funds rate, has been effectively at its lower bound of zero. In order to further ease the stance of monetary policy as the economic outlook deteriorated, the Federal Reserve purchased substantial quantities of assets with medium and long maturities. This paper explains how these purchases were implemented and discusses the mechanisms through which they can affect the economy. The authors present evidence that the purchases led to economically meaningful and long-lasting reductions in longer term interest rates on a range of securities, including securities that were not included in the purchase programs. These reductions in interest rates primarily reflect lower risk premiums, including term premiums, rather than lower expectations of future short-term interest rates.

No. 444, April 2010 Repo Runs

Antoine Martin, David Skeie, and Ernst-Ludwig von Thadden

This paper develops a model of financial institutions that borrow short-term and invest in long-term marketable assets. Because these financial intermediaries perform maturity transformation, they may be vulnerable to runs. The authors endogenize the profits of an intermediary and derive distinct liquidity and solvency conditions that determine whether a run can be prevented. They first characterize these conditions for an isolated intermediary and then generalize them to cases in which the intermediary can sell assets to prevent runs. The sale of assets can eliminate runs if the intermediary is solvent but illiquid. However, because of cash-inthe-market pricing, this possibility becomes less likely as more intermediaries face problems. In the limit, if a general market run occurs, no intermediary can sell assets to forestall a run, and our original solvency and liquidity constraints are again relevant for the stability of financial institutions.

No. 445, April 2010

Deferred Compensation, Risk, and Company Value: Investor Reactions to CEO Incentives

Chenyang Wei and David Yermack

Many commentators have suggested that companies pay top executives with deferred compensation, a type of incentive known as inside debt. Recent SEC disclosure reforms greatly increased the transparency of deferred compensation. Wei and Yermack investigate stockholder and bondholder reactions to companies' initial reports of their CEOs' inside debt positions in early 2007, when new disclosure rules took effect. The authors find that bond prices rise, equity prices fall, and the volatility of both securities drops upon disclosures by firms whose CEOs have sizable defined benefit pensions or deferred compensation. Similar changes in value occur for credit default swap spreads and exchange-traded options. The results indicate a reduction in firm risk, a transfer of value from equity toward debt, and an overall destruction of enterprise value when a CEO's deferred compensation holdings are large.

No. 446, May 2010

Global Banks and International Shock Transmission: Evidence from the Crisis

Nicola Cetorelli and Linda S. Goldberg

Global banks played a significant role in transmitting the 2007-09 financial crisis to emerging-market economies. This study examines adverse liquidity shocks on main developed-country banking systems and their relationships to emerging markets across Europe, Asia, and Latin America, isolating loan supply from loan demand effects. Loan supply in emerging markets across Europe, Asia, and Latin America was affected significantly through three separate channels: 1) a contraction in direct, cross-border lending by foreign banks; 2) a contraction in local lending by foreign banks' affiliates in emerging markets; and 3) a contraction in loan supply by domestic banks, resulting from the funding shock to their balance sheets induced by the decline in interbank, cross-border lending. Policy interventions, such as the Vienna Initiative introduced in Europe, influenced the lendingchannel effects on emerging markets of shocks to head-office balance sheets.

Economic Policy Review

No. 447, May 2010

Quantifying the Benefits of a Liquidity-Saving Mechanism

Enghin Atalay, Antoine Martin, and James McAndrews

This paper attempts to quantify the benefits associated with operating a liquidity-saving mechanism (LSM) in Fedwire, the large-value payment system of the Federal Reserve. Calibrating the model of Martin and McAndrews (2008), the authors find that potential gains are large compared with the likely cost of implementing an LSM, on the order of hundreds of thousands of dollars per day.

No. 449, May 2010

MBS Ratings and the Mortgage Credit Boom

Adam Ashcraft, Paul Goldsmith-Pinkham, and James Vickery

The authors study credit ratings on subprime and Alt-A mortgage-backed-securities (MBS) deals issued between 2001 and 2007, the period leading up to the subprime crisis. The fraction of highly rated securities in each deal is decreasing in mortgage credit risk (measured either ex ante or ex post), suggesting that ratings contain useful information for investors. However, they also find evidence of significant time variation in riskadjusted credit ratings, including a progressive decline in standards around the MBS market peak between the start of 2005 and mid-2007. Conditional on initial ratings, the authors observe underperformance (high mortgage defaults and losses and large rating downgrades) among deals with observably higher risk mortgages based on a simple ex ante model and deals with a high fraction of opaque low-documentation loans. These findings hold over the entire sample period, not just for deal cohorts most affected by the crisis.

No. 457, July 2010

Resolving Troubled Systemically Important Cross-Border Financial Institutions: Is a New Corporate Organizational Form Required?

Christine Cumming and Robert A. Eisenbeis

This paper explores the advantages of a new financial charter for large, complex, internationally active financial institutions that would address the corporate governance challenges of such organizations, including incentive problems in risk decisions and the complicated corporate and regulatory structures that impede cross-border resolutions. The charter envisions a single entity with broad powers in which the extent and timing of compensation are tied to financial results, senior managers and risk takers form a new risk-bearing stakeholder class, and a home-country-based resolution regime operates for the benefit of all creditors. The proposal is offered: 1) to highlight the point that even in the face of a more efficient and effective resolution process, incentives for excessive risk taking will continue unless the costs of risk decisions are internalized by institutions; 2) to suggest another avenue for moving toward a streamlined organizational structure and single global resolution process; and 3) to complement other proposals aimed at preserving a large role for market discipline and firm incentives in a postreform financial system.

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Jurrent Issues

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Do Underwriters Matter? The Impact of the Near Loss of an Equity Underwriter

Anna Kovner

The financial crisis provides a natural experiment for testing theoretical predictions of the equity underwriter's role following an initial public offering. Clients of Bear Stearns, Lehman Brothers, Merrill Lynch, and Wachovia saw their stock prices fall almost 5 percent, on average, on the day it appeared that their equity underwriter might collapse. Representing a loss in equity value of more than \$3 billion, the decline was more than 1 percent lower than the conditional return predicted by a market model. The price impact was worse for companies with more opaque operations and fewer monitors, suggesting that underwriters play an important role in monitoring newly public companies. There is no evidence that the abnormal price decrease was related to the role of the underwriter as market maker or lender.

No. 460, July 2010

The Information Value of the Stress Test and Bank Opacity

Stavros Peristiani, Donald P. Morgan, and Vanessa Savino

The authors investigate whether the "stress test," the extraordinary examination of the nineteen largest U.S. bank holding companies conducted by federal bank supervisors in 2009, produced information demanded by the market. Using standard event-study techniques, they find that the market had largely deciphered on its own which banks would have capital gaps before the stress test results were revealed, but that the market was informed by the size of the gap; given the study's proxy for the expected gap, banks with larger capital gaps experienced more negative abnormal returns. The study's findings suggest that the stress test helped quell the financial panic by producing vital information about banks. They also contribute to the academic literature on bank opacity and the value of government monitoring of banks.

No. 466, August 2010 A Private Lender Cooperative Model

for Residential Mortgage Finance

Toni Dechario, Patricia Mosser, Joseph Tracy, James Vickery, and Joshua Wright

This study describes a set of six design principles for the reorganization of the U.S. housing finance system and applies them to one model for replacing Fannie Mae and Freddie Mac that has so far received frequent mention but little sustained analysis—the lender cooperative utility. The authors discuss the pros and cons of such a model and propose a method for organizing participation in a mutual loss pool and an explicit, priced government insurance mechanism. They also discuss how these principles and this model are consistent with preserving the "to-be-announced," or TBA, market—particularly if the fixed-rate mortgage remains a focus of public policy.

No. 469, September 2010

Caught between Scylla and Charybdis? Regulating Bank Leverage When There Is Rent Seeking and Risk Shifting

Viral V. Acharya, Hamid Mehran, and Anjan Thakor

Banks face two different kinds of moral hazard problems: asset substitution by shareholders (making risky, negative net present value loans) and managerial rent seeking (investing in inefficient "pet" projects and consuming perquisites that yield private benefits). The privately optimal level of bank leverage is neither too low nor too high: It balances efficiently the market discipline imposed by owners of risky debt on managerial rent seeking against the asset substitution induced at high levels of leverage. However, when correlated bank failures can impose significant social costs, governments may have no option but to bail out bank creditors. Anticipation of this generates an equilibrium featuring systemic risk in which all banks choose inefficiently high leverage to fund correlated assets and market discipline is compromised. A minimum equity capital requirement can rule out asset substitution but also compromise market discipline by making bank debt too safe. The optimal capital regulation requires that a part of bank capital be unavailable to creditors upon failure, and be available to shareholders only contingent on good performance.

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No. 473, September 2010 Bailouts and Financial Fragility

Todd Keister

How does the belief that policymakers will bail out investors in the event of a crisis affect the allocation of resources and the stability of the financial system? Keister studies this question in a model of financial intermediation with limited commitment. When a crisis occurs, the efficient policy response is to use public resources to augment the private consumption of those investors facing losses. The anticipation of such a "bailout" distorts ex ante incentives, leading intermediaries to choose arrangements with excessive illiquidity and thereby increasing financial fragility. Prohibiting bailouts is not necessarily desirable, however: it induces intermediaries to become too liquid from a social point of view and may, in addition, leave the economy more susceptible to a crisis. A policy of taxing shortterm liabilities, in contrast, can correct the incentive problem while improving financial stability.

No. 475, September 2010 Equity Premium Predictions with Adaptive Macro Indexes

Jennie Bai

Fundamental economic conditions are crucial determinants of equity premia. However, commonly used predictors do not adequately capture the changing nature of economic conditions and hence have limited power in forecasting equity returns. To address the inadequacy, this paper constructs macro indexes from large data sets and adaptively chooses optimal indexes to predict stock returns. Bai finds that adaptive macro indexes explain a substantial fraction of the short-term variation in future stock returns and have more forecasting power than both the historical average of stock returns and commonly used predictors. The forecasting power exhibits a strong cyclical pattern, implying the ability of adaptive macro indexes to capture timevarying economic conditions. This finding highlights the importance of using dynamically measured economic conditions to investigate empirical linkages between the equity premium and macroeconomic fundamentals.

No. 477, November 2010 The Tri-Party Repo Market before the 2010 Reforms

Adam Copeland, Antoine Martin, and Michael Walker

This paper provides a descriptive and quantitative account of the tri-party repo market before the reforms proposed in 2010 by the Task Force on Tri-Party Repo Infrastructure. The authors provide an extensive description of the mechanics of this market. They also use data from July 2008 to early 2010 to document quantitative features of the market. They find that both the level of haircuts and the amount of funding were surprisingly stable in this market. The stability of the margins is in contrast to evidence from other repo markets. Perhaps surprisingly, the data reveal relatively few signs of stress in the market for dealers other than Lehman Brothers, on which the authors provide some evidence. This suggests that runs in the triparty repo market may occur precipitously, like traditional bank runs, rather than manifest themselves as large increases in margins.

Quantitative Methods

No. 448, May 2010

Design of Contingent Capital with a Stock Price Trigger for Mandatory Conversion

Suresh Sundaresan and Zhenyu Wang

A security robust to price manipulation must have a unique equilibrium, but the proposal for banks to issue contingent capital that must convert into common equity when the banks' stock price falls below a specified threshold, or "trigger," does not in general lead to a unique equilibrium in equity and contingent capital prices. For a unique equilibrium to exist, mandatory conversion cannot transfer value between equity holders and contingent capital investors. This necessary condition for unique equilibrium is usually not satisfied by contingent capital with a fixed coupon rate; however, contingent capital with a floating coupon rate is shown to have a unique equilibrium if the coupon rate is set equal to the risk-free rate. This structure of contingent capital anchors its value to par throughout the time before conversion, making it implementable in practice. Although contingent capital with a unique equilibrium is robust to price manipulation, the no-value-transfer condition may preclude it from generating the desired incentives for bank managers and demand from investors.

No. 452, May 2010

Bootstrapping Density-Weighted Average Derivatives

Matias D. Cattaneo, Richard K. Crump, and Michael Jansson

Employing the "small-bandwidth" asymptotic framework of Cattaneo, Crump, and Jansson (2009), this paper studies the properties of several bootstrap-based inference procedures associated with a kernel-based estimator of density-weighted average derivatives proposed by Powell, Stock, and Stoker (1989). In many cases, the validity of bootstrap-based inference procedures is found to depend crucially on whether the bandwidth sequence satisfies a particular (asymptotic linearity) condition. An exception to this rule occurs for inference procedures involving a studentized estimator that employs a "robust" variance estimator derived from the "small-bandwidth" asymptotic framework. The results of a small-scale Monte Carlo experiment are found to be consistent with the theory and indicate in particular that sensitivity with respect to the bandwidth choice can be ameliorated by using the "robust" variance estimator.

No. 464, July 2010

Funding Liquidity Risk and the Cross-Section of Stock Returns

Tobias Adrian and Erkko Etula

Adrian and Etula derive equilibrium pricing implications from an intertemporal capital asset pricing model where the tightness of financial intermediaries' funding constraints enters the pricing kernel. They test the resulting factor model in the cross-section of stock returns. Their empirical results show that stocks that hedge against adverse shocks to funding liquidity earn lower average returns. The pricing performance of their three-factor model is surprisingly strong across specifications and test assets, including portfolios sorted by industry, size, book-to-market, momentum, and long-term reversal. Funding liquidity can thus account for well-known asset pricing anomalies.

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No. 465, August 2010

Jump-Robust Volatility Estimation Using Nearest Neighbor Truncation

Torben G. Andersen, Dobrislav Dobrev, and Ernst Schaumburg

The authors propose two new jump-robust estimators of integrated variance based on highfrequency return observations. These MinRV and MedRV estimators provide an attractive alternative to the prevailing bipower and multipower variation measures. Specifically, the MedRV estimator has better theoretical efficiency properties than the tripower variation measure and displays better finite-sample robustness to both jumps and the occurrence of "zero" returns in the sample. Unlike the bipower variation measure, the new estimators allow for the development of an asymptotic limit theory in the presence of jumps. Finally, they retain the local nature associated with the low-order multipower variation measures. This proves essential for alleviating finite sample biases arising from the pronounced intraday volatility pattern that afflicts alternative jump-robust estimators based on longer blocks of returns. An empirical investigation of the Dow Jones 30 stocks and an extensive simulation study corroborate the robustness and efficiency properties of the new estimators.

No. 476, November 2010 Fitting Observed Inflation Expectations

Marco Del Negro and Stefano Eusepi

This paper provides evidence on the extent to which inflation expectations generated by a standard Christiano et al. (2005)/Smets and Wouters (2003)-type DSGE model are in line with what is observed in the data. The authors consider three variants of this model that differ in terms of the behavior of, and the public's information on, the central banks' inflation target, allegedly a key determinant of inflation expectations. They find that: 1) time variation in the inflation target is needed to capture the evolution of expectations during the post-Volcker period; 2) the variant where agents have imperfect information is strongly rejected by the data; 3) inflation expectations appear to contain information that is not present in the other series used in estimation; and 4) none of the models fully captures the dynamics of this variable.

Outside Journals

Members of the Research and Statistics Group publish in a wide range of economic and finance journals, conference volumes, and scholarly books.

Published in 2010

Macroeconomics and Growth

Tobias Adrian and Emanuel Moench

"Macro Risk Premium and Intermediary Balance Sheet Quantities," with Hyun Song Shin. *IMF Economic Review* 58, no. 1 (August): 179-207.

Olivier Armantier, Giorgio Topa, and Wilbert van der Klaauw

"Expectations of Inflation: The Role of Demographic Variables, Expectation Formation, and Financial Literacy," with Wändi Bruine de Bruin, Julie S. Downs, and Baruch Fischhoff. *Journal of Consumer Affairs* 44, no. 2 (June): 381-402.

Carlos Carvalho

"Imperfectly Credible Disinflation under Endogenous Time-Dependent Pricing," with Marco Bonomo. *Journal of Money, Credit, and Banking* 42, no. 5 (August): 799-831.

Vasco Cúrdia

"Credit Spreads and Monetary Policy," with Michael Woodford. *Journal of Money, Credit, and Banking* 42, no. 6 (September). Suppl. s1: 3-35.

Marco Del Negro

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Stefano Eusepi

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