Publications and Other Research 2008

Federal Reserve Bank of New York

Research and Statistics Group

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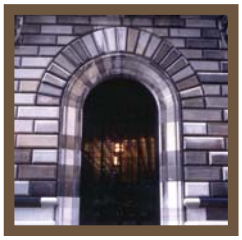

The cover is a rendering of the Federal Reserve Bank of New York's main entrance.

Introduction

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 24.

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 14

No. 1, July 2008

Signal or Noise? Implications of the Term Premium for Recession Forecasting

Joshua V. Rosenberg and Samuel Maurer

Since the 1970s, an inverted yield curve has been a reliable signal of an imminent recession. One interpretation of this signal is that markets expect monetary policy to ease as the Federal Reserve responds to an upcoming deterioration in economic conditions. Some have argued that the yield curve inversion in August 2006 did not signal an imminent recession, but instead was triggered by an unusually low level of the term premium. This article examines whether changes in the term premium can distort the recession signal given by an inverted yield curve. The authors use the Kim and Wright (2005) decomposition of the term spread into an expectations component and a term premium component to compare recession forecasting models with and without the term premium. They find that the expectations component of the term spread is a leading indicator of recession, while the term premium component is not. Their analysis of recession forecasting performance provides some evidence that a model based on the expectations component is more accurate than the standard model that uses the term spread.

EPR Executive Summary available

Poverty in New York City, 1969-99: The Influence of Demographic Change, Income Growth, and Income Inequality

Mark K. Levitan and Susan S. Wieler

The four-year rise in the U.S. poverty rate that began with the 2001 recession and the aftermath of Hurricane Katrina has sparked renewed interest in poverty among researchers and policymakers. Policies for addressing poverty are influenced by perceptions of its causes. Accordingly, this article evaluates the impact of several purported causes of poverty in New York City. Using decennial census data for 1970-2000, the authors employ simulations and a decomposition framework to investigate the relationship between poverty and key demographic and economic changes in the city. They find that two demographic changes—the growing percentage of the city's black and Hispanic populations and the increasing share of residents living in female-headed families—are clearly associated with the city's rise in poverty from 1969 to 1979 and the continued high poverty rate from 1979 to 1999. However, when these demographic changes are placed in the context of income growth and expanding income inequality, the study finds that the rise in income inequality plays a larger role in the 1979-99 persistence of poverty than do demographic changes. The authors also explore the influence of changes in earnings inequality on income inequality and poverty. They find a considerable increase in poverty and an expansion of earnings inequality within a key element of the city's population: persons living in full-year working families. The rise in earnings inequality can be traced to the stagnation of wages at the low end of the earnings distribution.

Why the U.S. Treasury Began Auctioning Treasury Bills in 1929

Kenneth D. Garbade

The U.S. Treasury began auctioning zero-coupon bills in 1929 to complement the fixed-price subscription offerings of coupon-bearing certificates of indebtedness, notes, and bonds that it had previously relied upon. Bills soon came to play a central role in Treasury cash and debt management. This article explains that the Treasury began auctioning bills to mitigate flaws in the structure of its financing operations that had become apparent during the 1920s. The flaws included the underpricing of new issues to limit the risk of a failed offering; borrowing in advance of actual requirements, resulting in negative carry on Treasury cash balances at commercial banks; and the redemption of maturing issues in advance of tax receipts, resulting in short-term borrowings from Federal Reserve Banks that sometimes led to transient fluctuations in reserves available to the banking system and undesirable volatility in overnight interest rates.
EPR Executive Summary available

No. 2, September 2008

Special Issue: The Economics of Payments

Introduction

James McAndrews

Papers on Theoretical Models of Money and Payments

Intraday Liquidity Management: A Tale of Games Banks Play

Morten L. Bech

Over the last few decades, most central banks, concerned about settlement risks inherent in payment netting systems, have implemented real-time gross settlement (RTGS) systems. Although RTGS systems can significantly reduce settlement risk, they require greater liquidity to smooth nonsynchronized payment flows. Thus, central banks typically provide intraday credit to member banks, either as collateralized credit or priced credit. Because intraday credit is costly for banks, how intraday liquidity is managed has become a competitive parameter in commercial banking and a policy concern of central banks. This article uses a game-theoretical framework to analyze the intraday liquidity management behavior of banks in an RTGS setting. The games played by banks depend on the intraday credit policy of the central bank and encompass two well-known paradigms in game theory: "the prisoner's dilemma" and "the stag hunt." The former strategy arises in a collateralized credit regime, where banks have an incentive to delay payments if intraday credit is expensive, an outcome that is socially inefficient. The latter strategy occurs in a priced credit regime, where postponement of payments can be socially efficient under certain circumstances. The author also discusses how several extensions of the framework affect the results, such as settlement risk, incomplete information, heterogeneity, and repeated play.
EPR Executive Summary available

An Economic Analysis of Liquidity-Saving Mechanisms

Antoine Martin and James McAndrews

A recent innovation in large-value payments systems has been the design and implementation of liquidity-saving mechanisms (LSMs), tools used in conjunction with real-time gross settlement (RTGS) systems. LSMs give system participants, such as banks, an option not offered by RTGS alone: they can queue their outgoing payments. Queued payments are released if some prespecified event occurs. LSMs can reduce the amount of central bank balances necessary to operate a payments system as well as quicken settlement. This article analyzes the performance of RTGS systems with and without the addition of an LSM. The authors find that, in terms of settling payments early, these mechanisms typically outperform pure RTGS systems. However, there are times when RTGS systems can be preferable to LSMs, such as when many banks that send payments early in RTGS choose to queue their payments when an LSM is available. The authors also show that the design of a liquidity-saving mechanism has important implications for the welfare of system participants, even in the absence of payment netting. In particular, the parameters specified determine whether the addition of an LSM increases or decreases welfare.
EPR Executive Summary available

Divorcing Money from Monetary Policy*

Todd Keister, Antoine Martin, and James McAndrews

Many central banks implement monetary policy in a way that maintains a tight link between the stock of money and the short-term interest rate. In particular, their implementation procedures require that the supply of reserve balances be set precisely in order to implement the target interest rate. Because bank reserves play other key roles in the economy, this link can create tensions with other important objectives, especially in times of acute market stress. This article considers an alternative approach to monetary policy implementation—known as a "floor system"—that can reduce or even eliminate these tensions. The authors explain how this approach, in which the central bank pays interest on reserves at the target interest rate, "divorces" the supply of money from the conduct of monetary policy. The quantity of bank reserves can then be set according to the payment or liquidity needs of financial markets. By removing the opportunity cost of holding reserves, the floor system also encourages the efficient allocation of resources in the economy.

EPR Executive Summary available

Papers on Empirical Analyses of Trends in Large-Value Payments

Global Trends in Large-Value Payments

Morten L. Bech, Christine Preisig, and Kimmo Soramäki

Globalization and technological innovation are two major forces affecting the financial system and its infrastructure. Perhaps nowhere are these trends more apparent than in the internationalization and automation of payments. While the effects of globalization and technological innovation are most obvious on retail payments, the influence is equally impressive on wholesale, or interbank, payments. Given the importance of payments and settlement systems to the smooth operation and resiliency of the financial system, it is important to understand the potential consequences of these developments. This article presents ten major long-range trends in the settlement of large-value payments worldwide. The trends are driven by technological innovation, structural changes in banking, and the evolution of central bank policies. The authors observe that banks, to balance risks and costs more effectively, are increasingly making large-value payments in real-time systems with advanced liquidity-management and liquidity-saving mechanisms. Moreover, banks are settling a larger number of foreign currencies directly in their home country by using offshore systems and settling a greater number of foreign exchange transactions in CLS (Continuous Linked Settlement) Bank or through payment-versus-payment mechanisms in other systems. The study also shows that the service level of systems is improving, through enhancements such as longer operating hours and standardized risk management practices that adhere to common standards, while transaction fees are decreasing. Payments settled in large-value payments systems are more numerous, but on average of smaller value. Furthermore, the overall nominal total value of large-value payments is increasing, although the real value is declining.

EPR Executive Summary available

Changes in the Timing Distribution of Fedwire Funds Transfers

Olivier Armantier, Jeffrey Arnold, and James McAndrews

The Federal Reserve's Fedwire funds transfer service—the biggest large-value payments system in the United States—has long displayed a peak of activity in the late afternoon. Theory suggests that the concentration of late-afternoon Fedwire activity reflects coordination among participating banks to reduce liquidity costs, delay costs, and credit risk; as these costs and risk change over time, payment timing most likely will be affected. This article seeks to quantify how the changing environment in which Fedwire operates has affected the timing of payment value transferred within the system between 1998 and 2006. It finds that the peak of the timing distribution has become more concentrated, has shifted to later in the day, and has actually divided into two peaks.

*A top download in 2008.

The authors suggest that these trends can be explained by a rise in the value of payments transferred over Fedwire, the settlement patterns of the private settlement institutions that use the system, and an increase in industry concentration. Although the study's results provide no specific evidence of heightened operational risk attributable to activity occurring later in the day, they point to a high level of interaction between Fedwire and private settlement institutions.
EPR Executive Summary available

The Timing and Funding of CHAPS Sterling Payments

Christopher Becher, Marco Galbiati, and Merxe Tudela

Real-time gross settlement (RTGS) systems such as CHAPS Sterling require large amounts of liquidity to support payment activity. To meet their liquidity needs, RTGS participants borrow from the central bank or rely on incoming payments from other participants. Both options can prove costly—the latter in particular if participants delay outgoing payments until incoming ones arrive. This article presents an empirical analysis of the timing and funding of payments in CHAPS. The authors seek to identify the factors driving the intraday profile of payment activity and the extent to which incoming funds are used as a funding source, a process known as liquidity recycling. They show that the level of liquidity recycling in CHAPS is high and stable throughout the day, and attribute this result to several features of the system. First, the settlement of time-critical payments provides liquidity to the system early in the settlement day; this liquidity can be recycled for the funding of less urgent payments. Second, CHAPS throughput guidelines provide a centralized coordination mechanism, in effect limiting any tendency toward payment delay. Third, the relatively small direct membership of CHAPS facilitates coordination between members, for example, through the use of bilateral net sender limits. Coordination encourages banks to maintain a relatively constant flux of payments throughout the day. The authors also argue that the high level of recycling helps to reduce liquidity risk, and that the relatively smooth intraday distribution of payments serves to mitigate operational risk associated with highly concentrated payment activity. They note, however, that the benefits of liquidity recycling are not evenly distributed between members of CHAPS.

Papers on Risk Management in Payments Systems

Understanding Risk Management in Emerging Retail Payments

Michele Braun, James McAndrews, William Roberds, and Richard Sullivan

New technologies used in payment methods can reduce risk, but they can also lead to new risks. Emerging retail payments are prone to operational and fraud risks, especially security breaches and potential use in illicit transactions. This article describes an economic framework for understanding risk control in retail payments. Risk control is a special type of good because it can protect one payment participant without diminishing the protection of other participants. As a result, the authors' economic framework emphasizes risk containment, primarily through the establishment and enforcement of risk management policies. Application of the framework to three types of emerging payments suggests that a payments system can successfully manage risk if it quickly recognizes problems, encourages commitment from all participants to control risk, and uses an appropriate mix of market and public policy mechanisms to align risk management incentives. The authors conclude that providers of emerging payment methods must mitigate risk effectively or face rejection in the payment market.
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An Economic Perspective on the Enforcement of Credit Arrangements: The Case of Daylight Overdrafts in Fedwire

Antoine Martin and David C. Mills

A fundamental concern for any lender is credit risk—the risk that a borrower will fail to fully repay a loan as expected. Thus, lenders want credit arrangements that are designed to compensate them for—and help them effectively manage—this type of risk. In certain situations, central banks engage in credit arrangements as lenders to banks, so they must manage their exposure to credit risk. This article discusses how the Federal Reserve manages its credit risk exposure associated with daylight overdrafts. The authors first present a simple economic framework for thinking about the causes of credit risk and the possible tools that lenders have to help them manage it. They then apply this framework to the Federal Reserve's Payments System Risk policy, which specifies the use of a variety of tools to manage credit risk. The study also analyzes a possible increase in the use of collateral as a credit risk management tool, as presented in a recent proposal by the Federal Reserve concerning changes to the Payments System Risk policy.

EPR Executive Summary available

EPR Executive Summaries

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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 14

No. 1, January/February 2008

Liquidity, Monetary Policy, and Financial Cycles*

Tobias Adrian and Hyun Song Shin

A close look at how financial intermediaries manage their balance sheets suggests that these institutions raise their leverage during asset price booms and lower it during downturns—pro-cyclical actions that tend to exaggerate the fluctuations of the financial cycle. The authors of this study argue that the growth rate of aggregate balance sheets may be the most fitting measure of liquidity in a market-based financial system. Moreover, the authors show a strong correlation between balance sheet growth and the easing and tightening of monetary policy.

No. 2, March 2008

Trends and Developments in the Economy of Puerto Rico

Jason Bram, Francisco E. Martínez, and Charles Steindel

A two-year-long economic downturn and a persistent income gap with the U.S. mainland contribute to an uncertain outlook for Puerto Rico. Still, the commonwealth possesses a skilled and educated workforce, a favorable business climate, and the benefits of U.S. legal and financial structures—advantages that could encourage the development of new industries and create the potential for sustained growth.
Second District Highlights
(Spanish-language version also available)

No. 3, April/May 2008

The Price of Land in the New York Metropolitan Area*

Andrew Haughwout, James Orr, and David Bedoll

The price of vacant land in an urban area is a fundamental indicator of an area's attractiveness. However, because the value of vacant land is hard to measure, indirect methods are typically used to gauge prices. A more direct approach to measuring land prices, using a unique data set, reveals that the price of unimproved land in the New York area is high, and rose sharply from 1999 to 2006. The rising trend suggests the underlying strength of the area's economy and the increasing value of the area's productivity and amenities.
Second District Highlights

*A top download in 2008.

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No. 4, June 2008

The Changing Nature of the U.S. Balance of Payments*

Rebecca Hellerstein and Cédric Tille

Earnings on cross-border investments figure only marginally in net estimates of the U.S. current account, but they represent an increasingly large share of gross flows between the United States and other nations. Because these earnings fluctuate much more sharply than trade flows, they can be expected to create permanently higher current account volatility. Such increased volatility is not necessarily grounds for concern, however; it reflects an international sharing of risk that provides a buffer against domestic economic uncertainty.

No. 5, July 2008

The Federal Reserve's Term Auction Facility*

Olivier Armantier, Sandra Krieger, and James McAndrews

As liquidity conditions in the term funding markets grew increasingly strained in late 2007, the Federal Reserve began making funds available directly to banks through a new tool, the Term Auction Facility (TAF). The TAF provides term funding on a collateralized basis, at interest rates and amounts set by auction. The facility is designed to improve liquidity by making it easier for sound institutions to borrow when the markets are not operating efficiently.

No. 6, August 2008

How Economic News Moves Markets*

Leonardo Bartolini, Linda Goldberg, and Adam Sacarny

Exploring how the release of new economic data affects asset prices in the stock, bond, and foreign exchange markets, the authors find that only a few announcements—the nonfarm payroll numbers, the GDP advance release, and a private sector manufacturing report—generate price responses that are economically significant and measurably persistent. Bond yields show the strongest response and stock prices the weakest. The authors' analysis of the direction of these effects suggests that news of stronger-than-expected growth and inflation generally prompts a rise in bond yields and the exchange value of the dollar.

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No. 7, September/October 2008

Employment in the New York–New Jersey Region: 2008 Review and Outlook

Jason Bram, James Orr, and Rae Rosen

The 2007 slowing in job growth in the New York–New Jersey region continued through August 2008. A projected weakening in the national economy through the end of 2008 combined with the market turmoil affecting New York City's finance sector suggests that the region will post substantially smaller job gains this year than it did in 2007. Beyond 2008, continued financial stress could lead to an even sharper and more protracted contraction in the city's finance sector, potentially spreading to other sectors of the region's economy.

Second District Highlights

No. 8, November 2008

Commodity Price Movements and PCE Inflation

Bart Hobijn

With the recent run-up in crop and energy prices—and the subsequent sharp reversal of these trends—the effects of commodity price movements on U.S. inflation merit renewed attention. A study of the contributions of grain and oil prices to the PCE index of inflation suggests that the effects are more modest than one might expect. Moreover, commodity price increases affect relatively few goods prices: Higher crop prices translate narrowly into price hikes for food, tobacco, and gardening supplies; rising oil prices mainly influence fuel, energy, and transportation prices.

No. 9, December 2008

New Measures of Economic Growth and Productivity in Upstate New York

Jaison R. Abel and Richard Deitz

Newly available measures of GDP at the metropolitan area level now afford a more comprehensive view of regional economic activity. An analysis of upstate New York's economic performance using these measures points to below-average output growth between 2001 and 2006 along with productivity levels and productivity growth below the U.S. average. The region's performance overall, however, is somewhat better than that of many manufacturing-oriented metro areas in the Great Lakes region.

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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.newyorkfed.org/research/research_update**.

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. 313, January 2008

Monetary Policy Implementation Frameworks: A Comparative Analysis

Antoine Martin and Cyril Monnet

Martin and Monnet compare two stylized frameworks for the implementation of monetary policy. The first framework relies only on standing facilities, and the second one relies only on open market operations. The authors show that the Friedman rule cannot be implemented in the first framework, but can be implemented using the second framework. However, for a given rate of inflation, the first framework unambiguously achieves higher welfare than the second one. The authors conclude that an optimal system of monetary policy implementation should contain elements of both frameworks. Their results also suggest that any such system should pay interest on both required and excess reserves.

No. 320, March 2008

Forming Priors for DSGE Models (and How It Affects the Assessment of Nominal Rigidities)

Marco Del Negro and Frank Schorfheide

This paper discusses prior elicitation for the parameters of dynamic stochastic general equilibrium (DSGE) models and provides a method for constructing prior distributions for a subset of these parameters from beliefs about the moments of the endogenous variables. The empirical application studies the role of price and wage rigidities in a New Keynesian DSGE model and finds that standard macro time series cannot discriminate among theories that differ in the quantitative importance of nominal frictions.

No. 321, March 2008

Monetary Policy Analysis with Potentially Misspecified Models

Marco Del Negro and Frank Schorfheide

Policy analysis with potentially misspecified dynamic stochastic general equilibrium (DSGE) models faces two challenges: estimation of parameters that are relevant for policy trade-offs, and treatment of estimated deviations from the cross-equation restrictions. This paper develops and explores policy analysis approaches that are based on either the generalized shock structure for the DSGE model or the explicit modeling of deviations from cross-equation restrictions. Using post-1982 U.S. data, the authors first quantify the degree of misspecification in a state-of-the art DSGE model and then document the performance of different interest rate feedback rules. They find that many of the policy prescriptions derived from the benchmark DSGE model are robust to the various treatments of misspecifications considered in this paper, but that quantitatively the cost of deviating from such prescriptions varies substantially.

No. 322, March 2008

Investment Shocks and Business Cycles

Alejandro Justiniano, Giorgio E. Primiceri, and Andrea Tambalotti

Shocks to the marginal efficiency of investment are the most important drivers of business cycle fluctuations in U.S. output and hours. Moreover, like a textbook demand shock, these disturbances drive prices higher in expansions. The authors reach these conclusions by estimating a dynamic stochastic general equilibrium (DSGE) model with several shocks and frictions. They also find that neutral technology shocks are not negligible, but their share in the variance of output is only around 25 percent and even lower for hours. Labor supply shocks explain a large fraction of the variation of hours at very low frequencies, but not over the business cycle. Finally, the study shows that imperfect competition and, to a lesser extent, technological frictions are key to the transmission of investment shocks in the model.

No. 323, April 2008

Optimal Monetary Policy under Sudden Stops

Vasco Cúrdia

This paper analyzes what monetary policy should accomplish in the event of a sudden stop of capital inflows from abroad. In such an event, optimal monetary policy induces higher interest rates and exchange rate depreciation. This policy is fairly well approximated by a flexible targeting rule, which stabilizes a basket composed of domestic price inflation, the exchange rate, and output. Cúrdia shows that from a welfare perspective, the success of a fixed exchange rate regime depends on the economic environment. For the benchmark parameterization, the peg performs the worst of the simple rules considered. For alternative parameterizations that feature low nominal rigidities or high elasticity of foreign demand, the fixed exchange rate regime performs relatively better.

No. 324, April 2008

Globalization and Inflation Dynamics: The Impact of Increased Competition

Argia M. Sbordone

This study analyzes the potential effect of global market competition on inflation dynamics. Using the Calvo model of staggered price-setting, Sbordone modifies the assumption of a constant elasticity of demand to provide a channel through which an increase in the number of traded goods may affect the degree of strategic complementarity in price setting and hence alter the dynamic response of inflation to marginal costs. She discusses the behavior of the variables that drive the impact of trade openness on this response and then evaluates whether an increase in the variety of traded goods of the magnitude observed in the United States in the 1990s might have a significant quantitative impact. The author finds it difficult to argue that such an increase in trade would have generated a sufficiently large increase in U.S. market competition to reduce the slope of the inflation–marginal cost relationship.

No. 325, May 2008

Durable Goods Inventories and the Great Moderation

James A. Kahn

Kahn revisits the hypothesis that changes in inventory management were an important contributor to volatility reductions during the Great Moderation. He documents how changes in inventory behavior contributed in particular to the stabilization of the U.S. economy within the durable goods sector and develops a model of inventory behavior consistent with the key facts about volatility decline in that sector. The model addresses concerns raised by a number of researchers who criticize the inventory literature's focus on finished goods inventories, given that stocks of works-in-process and materials are actually larger and more volatile that those of finished goods. The model adapts the stockout-avoidance concept to a production-to-order setting and shows that much of the intuition and many of the results regarding production volatility still apply.

No. 334, July 2008

Interpreting the Great Moderation: Changes in the Volatility of Economic Activity at the Macro and Micro Levels

Steven J. Davis and James A. Kahn

Davis and Kahn review evidence on the Great Moderation together with evidence on volatility trends at the micro level to develop a possible explanation for the decline in aggregate volatility since the 1980s and its consequences. Their explanation stresses improved supply-chain management, particularly in the durable goods sector, and less important, a shift in production and employment from goods to services. The study provides evidence that better inventory control made a substantial contribution to declines in firm-level and aggregate volatility. Consistent with this view, if one looks past the turbulent 1970s and early 1980s, much of the moderation reflects a decline in high-frequency (short-term) fluctuations. While these developments represent efficiency gains, they do not imply (nor is there evidence for) a reduction in economic uncertainty faced by individuals and households.

No. 339, July 2008

The Advantage of Flexible Targeting Rules

Andrea Ferrero

This paper investigates the consequences of debt stabilization for inflation targeting. If the monetary authority perfectly stabilizes inflation while the fiscal authority holds constant the real value of debt at maturity, the equilibrium dynamics might be indeterminate. However, determinacy can be restored by committing to targeting rules for either monetary or fiscal policy that include a concern for stabilization of the output gap. In solving the indeterminacy problem, flexible inflation targeting appears to be more robust than flexible debt targeting to alternative parameter configurations and steady-state fiscal stances. If considerations beyond stabilization call for a combination of strict inflation and debt targeting rules, the indeterminacy result can be overturned if the fiscal authority commits to holding constant debt net of interest rate spending.

No. 342, September 2008

Central Bank Transparency and Nonlinear Learning Dynamics

Stefano Eusepi

Central bank communication plays an important role in shaping market participants' expectations. This paper studies a simple nonlinear model of monetary policy in which agents have incomplete information about the economic environment. It shows that agents' learning and the dynamics of the economy are heavily affected by central bank transparency about its policy rule. A central bank that does not communicate its rule can induce "learning equilibria" in which the economy alternates between periods of deflation coupled with low output and periods of high economic activity with excessive inflation. More generally, initial beliefs that are arbitrarily close to the inflation target equilibrium can lead to complex economic dynamics, resulting in welfare-reducing fluctuations. On the contrary, central bank communication of policy rules helps stabilize expectations around the inflation target equilibrium.

No. 343, September 2008

Stabilizing Expectations under Monetary and Fiscal Policy Coordination

Stefano Eusepi and Bruce Preston

This paper analyzes how the formation of expectations constrains monetary and fiscal policy design. When agents are learning about the policy regime, there is greater need for policy coordination: the specific choice of monetary policy limits the set of fiscal policies consistent with macroeconomic stability—and simple Taylor-type rules frequently lead to expectations-driven instability. In contrast, non-Ricardian fiscal policies combined with an interest rate peg promote stability. Resolving uncertainty about the prevailing monetary policy regime improves stabilization policy, enlarging the menu of policy options consistent with stability. However, there are limits to the benefits of communicating the monetary policy regime: the more heavily indebted the economy, the greater the likelihood of expectations-driven instability.

No. 345, September 2008

What Drives Housing Prices?

James A. Kahn

Kahn develops a growth model with land, housing services, and other goods that is capable of explaining a substantial portion of the movements in housing prices over the past forty years. His paper introduces a Markov regime-switching specification for productivity growth in the nonhousing sector and uses micro data to calibrate a key cross-elasticity parameter that governs the relationship between productivity growth and home price appreciation. Combined with a realistic model of learning about the productivity process, the model is able to capture the medium- and low-frequency fluctuations of both price and quantity from the residential sector. The model suggests that the current downturn in the housing sector was triggered by a productivity slowdown that may have begun in 2004, an event that could reasonably have been viewed as highly unlikely by investors and mortgage issuers in the early part of the decade.

No. 346, September 2008

Financial Intermediaries, Financial Stability, and Monetary Policy

Tobias Adrian and Hyun Song Shin

In a market-based financial system, banking and capital market developments are inseparable. Adrian and Shin document evidence that balance sheets of market-based financial intermediaries provide a window on the transmission of monetary policy through capital market conditions. Short-term interest rates are determinants of the cost of leverage and are found to be important in influencing the size of financial intermediary balance sheets. However, except for periods of crises, higher balance-sheet growth tends to be followed by lower interest rates, and slower balance-sheet growth is followed by higher interest rates. This suggests that consideration might be given to a monetary policy that anticipates the potential disorderly unwinding of leverage. In this sense, monetary policy and financial stability policies are closely linked.

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 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. 316, February 2008

Macroeconomic Interdependence and the International Role of the Dollar

Linda Goldberg and Cédric Tille

The U.S. dollar plays a key role in international trade invoicing along two complementary dimensions. First, most U.S. exports and imports are invoiced in dollars; second, trade flows that do not involve the United States are often invoiced in dollars, a fact that has received relatively little attention. Using a simple center-periphery model, Goldberg and Tille show that the second dimension magnifies the exposure of periphery countries to the center's monetary policy, even when direct trade flows between the center and the periphery are limited. When intra-periphery trade volumes are sensitive to the center's monetary policy, the model predicts substantial welfare gains from coordinated monetary policy. The model also shows that although exchange rate movements are not fully efficient, flexible exchange rates are a central component of optimal monetary policy.

No. 329, June 2008

Inflation Dynamics in a Small Open-Economy Model under Inflation Targeting: Some Evidence from Chile

Marco Del Negro and Frank Schorfheide

This paper estimates a small open-economy dynamic stochastic general equilibrium (DSGE) model, specified along the lines of Galí and Monacelli (2005) and Lubik and Schorfheide (2007), using Chilean data for the full inflation-targeting period of 1999 to 2007. The authors study the specification of the policy rule followed by the Central Bank of Chile, the dynamic response of inflation to domestic and external shocks, and the change in these dynamics under different policy parameters. They use the DSGE-VAR methodology from their earlier work (2007) to assess the robustness of the conclusion to the presence of model misspecification.

No. 333, July 2008

Banking Globalization, Monetary Transmission, and the Lending Channel

Nicola Cetorelli and Linda S. Goldberg

Using quarterly information from all U.S. banks filing call reports between 1980 and 2005, Cetorelli and Goldberg find evidence of a lending channel for monetary policy in large banks, but only in those banks that serve the domestic market and have no international operations. The authors show that the large banks that operate globally rely on internal capital markets with their foreign affiliates to help smooth domestic liquidity shocks. They also show that the existence of such internal capital markets contributes to an international propagation of domestic liquidity shocks to lending by affiliated banks abroad. While these results indicate a substantially more active lending channel than is documented in Kashyap and Stein (2000), they also imply that the lending channel within the United States is declining in strength as banking becomes more globalized.

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. The authors' model also provides a decomposition of this difference in persistence that allows a structural interpretation of the approaches found in the empirical literature on aggregation and the real exchange rate.

Microeconomics

No. 315, January 2008

Impact of Voucher Design on Public School Performance: Evidence from Florida and Milwaukee Voucher Programs

Rajashri Chakrabarti

This paper examines the impact of vouchers and voucher design on public school performance. The 1990 Milwaukee experiment can be viewed as a "voucher shock" program that suddenly made low-income students eligible for vouchers. The 1999 Florida program can be viewed as a "threat of voucher" program, in which schools getting an "F" grade for the first time are exposed to the threat of vouchers, but do not face vouchers unless and until they get a second "F" within the next three years. In the context of a theoretical model, the study argues that the threatened public schools will unambiguously improve under the Florida-type program, and this improvement will exceed that achieved under the Milwaukee-type program. It then shows that these findings are validated empirically.

No. 332, July 2008

Human Capital and Economic Activity in Urban America

Jaison R. Abel and Todd M. Gabe

This paper examines the relationship between human capital and economic activity in U.S. metropolitan areas, extending the existing literature in two important ways. First, the authors utilize new data on metropolitan area GDP to measure economic activity. Using educational attainment as an indicator of human capital, they find that a one-percentage-point increase in the proportion of residents with a college degree is associated with a 2.3 percent increase in metropolitan area GDP per capita. Second, Abel and Gabe move beyond the conventional proxy for human capital—educational attainment—to develop new measures that reflect the types of knowledge within U.S. metropolitan areas. Their results show that knowledge associated with the provision of producer services and information technology are particularly important determinants of economic vitality in U.S. metro areas.

No. 341, August 2008

Juvenile Delinquent Mortgages: Bad Credit or Bad Economy?

Andrew Haughwout, Richard Peach, and Joseph Tracy

Haughwout, Peach, and Tracy study early defaults among nonprime mortgages from the 2001 to 2007 vintages. After documenting a dramatic rise in such defaults and discussing their correlates, they examine two primary explanations: changes in underwriting standards that took place over this period and changes in the economic environment. The authors find that while credit standards were an important factor behind the rising probability of an early default, changes in the economy after 2004—especially a sharp reversal in house price appreciation—were the more critical factor. They also find that despite their rich set of covariates, much of the increase remains unexplained, even in retrospect. This finding helps explain why credit markets seemed surprised by the sharp increase in early defaults in the 2006 and 2007 nonprime vintages.

No. 344, September 2008

Have Amenities Become Relatively More Important Than Firm Productivity Advantages in Metropolitan Areas?

Richard Deitz and Jaison R. Abel

Deitz and Abel analyze patterns of compensating differentials to determine whether a region's bundle of site characteristics has a greater net effect on household location decisions relative to firm location decisions in U.S. metropolitan areas over time. The authors estimate skill-adjusted wages and attribute-adjusted rents for 238 metropolitan areas in 1990 and 2000. They classify each metropolitan area based on whether amenities or firm productivity advantages dominate, and analyze the extent to which these classifications change between 1990 and 2000. Deitz and Abel then decompose compensating differentials into amenity and firm productivity advantage components and examine how these components change. Empirical results suggest that while the relative importance of amenities appears to have increased slightly between 1990 and 2000, firm productivity advantages continued to dominate amenities in the vast majority of metropolitan areas during this decade.

No. 347, September 2008

ESOP Fables: The Impact of Employee Stock Ownership Plans on Labor Disputes

Peter Cramton, Hamid Mehran, and Joseph Tracy

Cramton, Mehran, and Tracy examine the implications of employee stock ownership plans (ESOPs) for collective bargaining or, more generally, for cross ownership. They extend the signaling model of Cramton and Tracy (1992) to allow partial ownership by the union, and they demonstrate that ESOPs create incentives for unions to become weaker bargainers. The model predicts that ESOPs will lead to a reduction in strike incidence and in the fraction of labor disputes that involve a strike. U.S. bargaining data from 1970 to 1995 suggest that ESOPs do increase the efficiency of labor negotiations by shifting the composition of disputes away from costly strikes. Consistent with improved bargaining efficiency, the authors find that the announcement of a union ESOP leads to a 50 percent larger stock market reaction when compared with the announcement of a nonunion ESOP.

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 those associated with default and higher mobility.

Banking and Finance

No. 312, January 2008

Run Equilibria in a Model of Financial Intermediation

Huberto M. Ennis and Todd Keister

Ennis and Keister study the Green and Lin (2003) model of financial intermediation with two new features: traders may face a cost of contacting the intermediary, and consumption needs may be correlated across traders. The authors show that each feature is capable of generating an equilibrium in which some (but not all) traders "run" on the intermediary by withdrawing their funds at the first opportunity regardless of their true consumption needs. Their results also provide some insight into elements of the economic environment that are necessary for a run equilibrium to exist in general models of financial intermediation. In particular, the findings highlight the importance of information frictions that cause the intermediary and traders to have different beliefs, in equilibrium, about the consumption needs of traders who have yet to contact the intermediary.

No. 314, January 2008

What Can We Learn from Privately Held Firms about Executive Compensation?

Rebel A. Cole and Hamid Mehran

This study examines the determinants of CEO compensation using data from a nationally representative sample of privately held U.S. corporations. It finds that 1) pay-size elasticity is much larger for privately held firms than for the publicly traded firms on which previous research has almost exclusively focused; 2) executives at C-corporations are paid significantly more than executives at S-corporations; 3) executive pay is inversely related to CEO ownership; 4) executive pay is inversely related to leverage; and 5) executive pay is associated with a number of CEO characteristics, including age, education, and gender: it is inversely related to CEO age and positively related to educational attainment, and female executives are paid significantly less than their male counterparts.

No. 318, March 2008

Understanding the Securitization of Subprime Mortgage Credit*

Adam B. Ashcraft and Til Schuermann

Ashcraft and Schuermann provide an overview of the subprime mortgage securitization process and the seven key informational frictions that arise. They discuss the ways that market participants work to minimize these frictions and speculate on how this process broke down. They continue with a complete picture of the subprime borrower and the subprime loan, discussing both predatory borrowing and predatory lending. The authors present the key structural features of a typical subprime securitization, document how rating agencies assign credit ratings to mortgage-backed securities, and outline how these agencies monitor the performance of mortgage pools over time. Throughout the paper, they draw upon the example of a mortgage pool securitized by New Century Financial during 2006.

No. 319, March 2008

Settlement Delays in the Money Market

Leonardo Bartolini, Spence Hilton, and James McAndrews

The authors track 38,000 money market trades from execution to delivery and return to provide a first empirical analysis of settlement delays in financial markets. In line with predictions from recent models showing that financial claims are settled strategically, they document a tendency by lenders to delay delivery of loaned funds until the afternoon hours. The authors find that banks follow a simple strategy to manage the risk of account overdrafts—delaying the settlement of large payments relative to that of small payments. They also find evidence of strategic delay in the return of borrowed funds, although they can explain a smaller fraction of the dispersion in delays in the return than in the delivery leg of money market lending.

No. 328, May 2008

Liquidity and Leverage*

Tobias Adrian and Hyun Song Shin

In a financial system in which balance sheets are continuously marked to market, asset price changes appear immediately as changes in net worth, eliciting responses from financial intermediaries who adjust the size of their balance sheets. Adrian and Shin document evidence that marked-to-market leverage is strongly procyclical. Such behavior has aggregate consequences. Changes in dealer repos—the primary margin of adjustment for the aggregate balance sheets of intermediaries—forecast changes in financial market risk as measured by the innovations in the Chicago Board Options Exchange Volatility Index. Aggregate liquidity can be seen as the rate of change of the aggregate balance sheet of the financial intermediaries.

*A top download in 2008.

No. 330, June 2008

Corporate Performance, Board Structure, and Their Determinants in the Banking Industry

Renée B. Adams and Hamid Mehran

Using a sample of banking firm data spanning forty years, Adams and Mehran examine the relationship between board structure (size and composition) and bank performance as well as determinants of board structure. The authors document that merger-and-acquisition activity influences bank board composition and provide new evidence that organizational structure is significantly associated with bank board size. They argue that these factors may explain why banking firms with larger boards do not underperform their peers in terms of Tobin's Q. The study's findings suggest caution in applying regulations to banking firms motivated by research on the governance of nonfinancial firms. Since organizational structure is not specific to banks, it may be an important determinant for the boards of nonfinancial firms with complex organizational structures, such as business groups.

No. 331, June 2008

The Welfare Effects of a Liquidity-Saving Mechanism

Enghin Atalay, Antoine Martin, and James McAndrews

This paper considers the welfare effects of introducing a liquidity-saving mechanism (LSM) in a real-time gross settlement payments system. The authors study the planner's problem to get a better understanding of the economic role of an LSM and find that an LSM can achieve the planner's allocation for some parameter values. The planner's allocation cannot occur without an LSM, as long as some payments can be delayed without cost. They show that, in equilibrium with an LSM, there can be either too few or too many payments settled early compared with the planner's allocation, depending on the parameter values. Using Fedwire data to calibrate their model, the authors describe the equilibrium that would arise with an LSM and compare welfare with and without the mechanism. Their results suggest that introducing an LSM could have significant benefits.

No. 335, July 2008

The Effect of the Term Auction Facility on the London Inter-Bank Offered Rate

James McAndrews, Asani Sarkar, and Zhenyu Wang

This paper examines the effect of the Federal Reserve's Term Auction Facility (TAF) on the London Inter-Bank Offered Rate (LIBOR). The particular question investigated is whether the announcements and operations of the TAF are associated with downward shifts of the LIBOR; such an association would provide one indication of the TAF's effectiveness in mitigating liquidity problems in the interbank funding market. The study's empirical results suggest that the TAF has helped to ease strains in this market.

No. 336, July 2008

A Study of Competing Designs for a Liquidity-Saving Mechanism

Antoine Martin and James McAndrews

Martin and McAndrews study two designs for a liquidity-saving mechanism (LSM), a queuing arrangement used as part of an interbank settlement system. They consider an environment in which banks must decide to send, queue, or delay their payments after observing a noisy signal of a liquidity shock. With one design—a balance-reactive LSM—banks can set a balance threshold below which payments are not released from the queue. Banks can choose their threshold in such a way that the release of a payment from the queue is conditional on the liquidity shock. With the second design—a receipt-reactive LSM—a payment is released from the queue if an offsetting payment is received, regardless of the liquidity shock. The authors find that these two designs have opposite effects on different types of payments. They also show that parameter values determine which design provides higher welfare.

No. 337, July 2008

Should There Be Intraday Money Markets?

Antoine Martin and James McAndrews

This paper considers the case for an intraday market for reserves. Martin and McAndrews discuss the separate roles of intraday and overnight reserves and argue that an intraday market could be organized in the same way as the overnight market. The authors present arguments for and against a market for intraday reserves when the marginal cost of overnight reserves is positive. They also consider how reserves should be supplied when the cost of overnight reserves is zero. In that case, the distinction between overnight and intraday reserves becomes blurred, raising an important question: What is the role of the overnight market?

No. 338, July 2008

Financial Intermediary Leverage and Value at Risk

Tobias Adrian and Hyun Song Shin

Adrian and Shin study a contracting model for the determination of leverage and balance sheet size for financial intermediaries that fund their activities through collateralized borrowing. The model gives rise to two features: First, leverage is procyclical in the sense that leverage is high when the balance sheet is large. Second, leverage and balance sheet size are both determined by the riskiness of assets. For U.S. investment banks, the authors find empirical support for both features of the model—that is, leverage is procyclical, and both leverage and balance sheet size are determined by measured risks. In a system context, increased risk reduces the debt capacity of the financial system as a whole, giving rise to amplified deleveraging by institutions by way of the chain of repo transactions in the financial system.

No. 340, August 2008

Pricing the Term Structure with Linear Regressions

Tobias Adrian and Emanuel Moench

Adrian and Moench develop an affine term structure model from a conditionally linear pricing kernel, without making distributional assumptions about shocks. Assuming pricing factors to be observable, they estimate the model by way of three-stage ordinary least squares, which can be interpreted as dynamic Fama-MacBeth regressions. The authors derive cross-equation restrictions for bond yields, which they do not impose in the estimation, but instead test. They can easily estimate specifications with large numbers of pricing factors, including volatility factors. The authors uncover specifications that give rise to lower pricing errors than do commonly advocated specifications, both in- and out-of-sample. Efficiency can be obtained by way of the generalized method of moments estimator.

No. 348, September 2008

CoVaR

Tobias Adrian and Markus K. Brunnermeier

Adrian and Brunnermeier define *CoVaR* as the value at risk (VaR) of financial institutions conditional on other institutions being in distress. The increase of CoVaR relative to VaR measures spillover risk among institutions. The authors estimate CoVaR using quantile regressions and document significant CoVaR increases among financial institutions. They identify six risk factors that allow institutions to offload tail risk and show that such hedging reduces the wedge between CoVaR and VaR. Adrian and Brunnermeier argue that financial institutions should report CoVaR in addition to VaR, and they draw implications for risk management, regulation, and systemic risk. They define *co-expected shortfall* as a sum of CoVaRs.

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 comprehensive 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.

Quantitative Methods

No. 317, February 2008

Forecasting Economic and Financial Variables with Global VARs

M. Hashem Pesaran, Til Schuermann, and L. Vanessa Smith

The authors use a global vector autoregressive (GVAR) model to generate out-of-sample one-quarter- and four-quarters-ahead forecasts of real output, inflation, real equity prices, exchange rates, and interest rates over the period 2004:1-2005:4 for 134 variables from twenty-six regions made up of thirty-three countries covering about 90 percent of world output. The forecasts are compared with typical benchmarks, and the effects of model and estimation uncertainty on forecast outcomes are examined by pooling forecasts obtained from different GVAR models estimated over alternative sample periods. The authors find that averaging forecasts across both models and windows makes a significant difference. Indeed, the double-averaged GVAR forecasts performed better than the benchmark forecasts, especially for output, inflation, and real equity prices.

No. 326, May 2008

Dynamic Factor Models with Time-Varying Parameters: Measuring Changes in International Business Cycles

Marco Del Negro and Christopher Otrok

Del Negro and Otrok develop a dynamic factor model with time-varying factor loadings and stochastic volatility in both the latent factors and idiosyncratic components. They employ this new measurement tool to study the evolution of international business cycles in the post–Bretton Woods period, using a panel of output growth rates for nineteen countries. The authors find 1) statistical evidence of a decline in volatility for most countries, with the timing, magnitude, and source (international or domestic) of the decline differing across countries; 2) some evidence of a decline in business cycle synchronization for Group of Seven countries, but otherwise no evidence of changes in synchronization for the sample countries, including European and euro-area countries; and 3) convergence in the volatility of business cycles across countries.

No. 327, May 2008

Revisiting Useful Approaches to Data-Rich Macroeconomic Forecasting

Jan J. J. Groen and George Kapetanios

Groen and Kapetanios revisit a number of data-rich prediction methods that are widely used in macroeconomic forecasting and compare them with a lesser known alternative: partial least squares regression. The authors provide a theorem showing that when the data comply with a factor structure, principal components and partial least squares regressions provide asymptotically similar results. They also argue that forecast combinations can be interpreted as a restricted form of partial least squares regression. The study applies partial least squares, principal components, and Bayesian ridge regressions to a large panel of monthly U.S. macroeconomic and financial data to forecast CPI inflation, core CPI inflation, industrial production, unemployment, and the federal funds rate across different subperiods and finds that partial least squares regression usually has the best out-of-sample performance when compared with the two other data-rich prediction methods.

Introduction
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Outside Journals

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