

Research Update

Research and Statistics Group

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Large Banks Are Driving the Banking Industry's "Return to Retail"

Since the start of the decade, the U.S. banking industry has been experiencing a "return to retail," characterized by rising trends in retail loan and deposit shares on commercial banks' balance sheets and continued growth in the number of bank branches. This renewed interest in retail banking contrasts with the 1990s, when banks sought to diversify revenues, deemphasize branch networks, and target financial services to a broader range of clients.

In "The Role of Retail Banking in the U.S. Banking Industry: Risk, Return, and Industry Structure," authors Timothy Clark, Astrid Dick, Beverly Hirtle, Kevin Stiroh, and Robard Williams offer insight into the shift back to retail banking, broadly defined as the range of products and services provided to consumers and small businesses.

According to the authors, the principal attraction of retail banking at the bank level appears to be the view that its revenues are stable, so it can offset volatility in nonretail businesses. At the industry level, interest in retail activities fluctuates in

predictable ways with the performance of nonretail banking and financial market activities.

The study concludes that the ongoing "return to retail" strategy may be more persistent than in past cycles because of the substantial resource commitments of the very largest banks. "Branching deregulation in the 1990s enabled large banks to compete more effectively with smaller local institutions by establishing branch networks spanning large geographic areas," the authors observe. "These banks have made substantial investments in large branch networks and other retail banking infrastructure, a development that seems unlikely to unwind quickly." They add that technological innovation may also have increased scale economies

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in key retail banking activities, such as small business lending.

The article, forthcoming in the *Economic Policy Review*, is available at

www.newyorkfed.org/research/epr/forthcoming/0703hirt.html.

Hedge Fund Environment Today Differs Markedly from 1998

Recent high correlations among hedge fund returns could point to concentrations of risk similar to those preceding the hedge fund crisis of 1998. However, a new study concludes that the hedge fund environment is significantly different today, and suggests that concerns over the vulnerability of these funds may be overstated (“Measuring Risk in the Hedge Fund Sector,” *Current Issues in Economics and Finance*, vol. 13, no. 3).

Author Tobias Adrian reports that hedge funds, which are not directly regulated, manage an estimated \$1.5 trillion in assets while contributing more than half of average trading volume in the

equity and corporate bond markets. Significantly, the collapse of the hedge fund Long-Term Capital Management (LTCM) in 1998 confirmed fears that heavy losses by these funds can drain large amounts of liquidity from the financial markets. The high correlations among returns of late, and their risk implications, have therefore led to growing concerns over hedge funds’ liquidity effects in times of market stress.

According to Adrian, a key determinant of hedge fund risk is the degree of similarity between different funds’ trading strategies. Similar strategies can heighten risk when funds have to close out comparable positions following a

Publications and Papers

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

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

common shock. Adrian assesses the similarity of these strategies by examining how closely together the funds' returns move. If the returns of many funds are either high or low at the same time, the funds could sustain losses simultaneously and thus jeopardize market liquidity and stability.

The author explains that one measure of this comovement of returns is covariance. The covariance across a group of

funds captures the extent to which their returns move together, or apart, in dollar terms. When covariance between two funds is high, if one earns a larger-than-normal return, the other is likely to as well. It is largely immaterial, however,

if two funds gain or lose at the same time if such joint gains and losses are only a small fraction of the funds' total returns.

Therefore, analysts "normalize" this measure by dividing the covariance of fund returns by the returns' total variability. This calculation reveals how closely hedge fund returns move together relative to their overall volatility—a different measure of comovement known as correlation. This measure, though, has a notable drawback: correlation may change because its numerator

(the returns' covariance) or denominator (the returns' volatility) changes. For instance, the correlation of different funds' returns may rise either because the returns have moved more closely together (covariance has increased) or because their volatility has fallen.

This is an important distinction, observes Adrian. He explains that the correlation of hedge fund returns rose prior to the LTCM crisis *and* in recent times—but for different reasons. An increase in the comovement of dollar returns was the leading cause of rising correlation in the 1990s, he notes, but a decline in overall volatility accounts for the recent elevation.

The author also finds that high correlations of returns generally do not precede increases in volatility in the hedge fund sector, but high covariances do. "While the LTCM collapse was preceded by high correlations and high covariances in an environment of increased hedge fund return volatility, the current environment is characterized by only average levels of covariances and low volatility," he says. "Therefore, with respect to both volatility and covariance, the current environment differs markedly from the one in the months preceding the LTCM crisis."

The article is available at www.newyorkfed.org/research/current_issues/ci13-3.html.

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New Titles in the Staff Reports Series

The following new Staff Reports are available at www.newyorkfed.org/research/staff_reports.

MACROECONOMICS AND GROWTH

No. 286, May 2007

Inflation Persistence: Alternative Interpretations and Policy Implications Argia M. Sbordone

Sbordone considers the policy implications of two alternative structural interpretations of observed inflation persistence, which correspond to two alternative specifications of the New Keynesian Phillips curve (NKPC). The first specification allows for some degree of intrinsic persistence by way of a lagged inflation term in the NKPC. The second is a purely forward-looking model, in which expectations farther into the future matter and coefficients are time-varying. With a simple quantitative exercise, the author illustrates the consequences of implementing monetary policy, assuming a degree of intrinsic persistence that differs from the true one. The results suggest that the costs of implementing a stabilization policy when the policymaker overestimates the degree of intrinsic persistence are potentially higher than the costs of ignoring actual structural persistence; the result is more clear-cut when the policymaker minimizes a welfare-based loss function.

INTERNATIONAL

No. 283, April 2007

Why Are Switzerland's Foreign Assets So Low? The Growing Financial Exposure of a Small Open Economy Nicolas Stoffels and Cédric Tille

Since 1999, Switzerland's international investment position has taken a surprising turn: Large and persistent current account surpluses have failed to boost the value of Swiss foreign assets. This study links this failure to the substantial increase in the leveraging of Switzerland's international assets and liabilities over the last twenty years. Stoffels and Tille estimate the impact of exchange rate and asset price movements on Swiss net foreign assets, and show that they led to substantial valuation losses beginning in 1999. Indeed, these losses account for one-quarter to one-half of the gap between net foreign assets and cumulated current account flows. The valuation effects, the authors suggest, have erased the advantageous return that Switzerland would otherwise have earned on its net foreign asset position.

No. 287, June 2007

A Framework for Identifying the Sources of Local Currency Price Stability with an Empirical Application Pinelopi K. Goldberg and Rebecca Hellerstein

The inertia of traded goods' local currency prices in the face of exchange rate changes is a well-documented phenomenon in international economics. This paper develops a framework for identifying the sources

of local currency price stability. The empirical approach exploits manufacturers' and retailers' first-order conditions—in conjunction with detailed information on the frequency of price adjustments in response to exchange rate changes—to quantify the relative importance of fixed costs of repricing, local-cost nontraded components, and markup adjustment by manufacturers and retailers in the incomplete transmission of exchange rate changes to prices. The approach is applied to micro data from the beer market.

BANKING AND FINANCE

No. 281, April 2007

Why Does Overnight Liquidity Cost More Than Intraday Liquidity?

Joydeep Bhattacharya, Joseph H. Haslag, and Antoine Martin

The authors argue that the observed difference in the cost of intraday and overnight liquidity is part of an optimal payments system design. In their environment, the interest charged on overnight liquidity affects output, while the cost of intraday liquidity only affects the distribution of resources between money holders and non-money holders. The low cost of intraday liquidity follows from the Friedman rule, but with respect to overnight liquidity, it is optimal to deviate from the Friedman rule. The cost differential simultaneously reduces the incentive to overuse money and encourages risk sharing.

No. 282, April 2007

Liquidity-Saving Mechanisms

Antoine Martin and James McAndrews

Martin and McAndrews study the incentives of participants in a real-time gross settlement system with and without the addition of a liquidity-saving mechanism (queue). Participants in the authors' model face a liquidity shock and different costs for delaying payments. They trade off the cost of delaying a payment against the cost of borrowing liquidity from the central bank. The heterogeneity of participants in the model gives rise to a rich set of strategic interactions. The paper's main contribution is to show that the design of a liquidity-saving mechanism has important implications for welfare, even in the absence of netting. In particular, the study finds that parameters will determine whether the addition of a liquidity-saving mechanism increases or decreases welfare.

No. 284, May 2007

Reserve Levels and Intraday Federal Funds Rate Behavior

Spence Hilton and Warren B. Hrungr

Hilton and Hrungr analyze the impact of aggregate reserve levels on the intraday behavior of the federal funds rate over a sample period extending from 2002 to 2005. They study both how the reserve levels accumulated earlier in a maintenance period influence the morning level of the funds rate relative to the target set by the Federal Open Market Committee, and how same-day reserve levels as well as the reserve levels accumulated earlier affect intraday movements of the funds rate. The impact of recurring calendar events on the behavior of the federal funds rate is also explored. In general, the authors find a negative relationship between their measures of reserve levels and their two measures of federal funds rate behavior.

QUANTITATIVE METHODS

No. 285, May 2007

A Flexible Approach to Parametric Inference in Nonlinear Time Series Models

Gary Koop and Simon Potter

Many structural break and regime-switching models have been used with macroeconomic and financial data. This paper develops a flexible parametric model that accommodates virtually any of these specifications—and does so in a way that allows for straightforward Bayesian inference. The model adds two concepts—ordering and distance—to a standard state space framework. By various reorderings of the data, Koop and Potter can accommodate a wide range of nonlinear time series models. By allowing the state equation variances to depend on the distance between observations, the parameters can evolve in different ways, allowing for models that exhibit abrupt change as well as those that permit a gradual evolution of parameters. The authors show how their model nests every popular model in the regime-switching and structural break literatures.

No. 288, June 2007

Generalized Canonical Regression

Arturo Estrella

Estrella introduces a generalized approach to canonical regression, in which a set of jointly dependent variables enters the left-hand side of the equation as a linear combination, formally like the linear combination of regressors in the right-hand side of the equation. Natural applications occur when the dependent variable is the sum of components that may optimally receive unequal weights or in time series models in which the appropriate timing of the dependent variable is not known a priori. The author derives a quasi-maximum likelihood estimator as well as its asymptotic distribution, and provides illustrative applications.

No. 289, June 2007

Extracting Business Cycle Fluctuations: What Do Time Series Filters Really Do?

Arturo Estrella

Various methods are available to extract the “business cycle component” of a given time series variable. These methods may be derived as solutions to frequency extraction or signal extraction problems, and differ both in their handling of trends and noise and in their assumptions about the ideal time series properties of a business cycle component. The filters are frequently illustrated by application to white noise, but applications to other processes may have very different and possibly unintended effects. This study examines several frequently used filters as they apply to a range of dynamic process specifications and derives some guidelines for the use of such techniques. ■

Recently Published

Michael Fleming and Kenneth Garbade. 2007. “**Dealer Behavior in the Specials Market for U.S. Treasury Securities.**” *Journal of Financial Intermediation* 16, no. 2 (April): 204-28.

Linda Goldberg. 2007. “**Exchange Rate Pass-Through to Import Prices in the Euro Area,**” with José Manuel Campa and José M. González-Mínguez. In Filippo di Mauro and Robert Anderton, eds., *The External Dimension of the Euro Area: Assessing the Linkages*, 63-94. Cambridge: Cambridge University Press.

Linda Goldberg. 2007. “**The International Exposure of U.S. Banks: Europe and Latin America Compared.**” In Sebastian Edwards, ed., *International Capital Flows*, 203-32. Chicago: University of Chicago Press.

Beverly Hirtle and Kevin Stiroh. 2007. “**The Return to Retail and the Performance of U.S. Banks.**” *Journal of Banking and Finance* 31, no. 4 (April): 1101-33.

Jonathan McCarthy. 2007. “**Inventory Dynamics and Business Cycles: What Has Changed?**” with Egon Zakrajšek. *Journal of Money, Credit, and Banking* 39, no. 2-3 (March-April): 591-613.

Jonathan McCarthy and Charles Steindel. 2007. “**Housing Activity and Consumer Spending.**” *Business Economics* 42, no. 2 (April): 6-21.

Paolo Pesenti. 2007. “**Smooth Landing or Crash? Model-Based Scenarios of Global Current Account Rebalancing,**” with Hamid Faruquee, Douglas Laxton, and Dirk Muir. In Richard H. Clarida, ed., *G7 Current Account Imbalances: Sustainability and Adjustment*, 377-451. NBER conference volume. Chicago: University of Chicago Press.

Charles Steindel. 2007. “**Household Saving and Wealth Accumulation in the United States.**” Bank for International Settlements *IFC Bulletin*, no. 25 (March): 58-70. Proceedings of the conference *Measuring the Financial Position of the Household Sector*, vol. 1.

Kevin Stiroh. 2007. “**Information Technology and Productivity Growth in the 2000s,**” with Matthew Botsch. *German Economic Review* 8, no. 2 (May): 255-80.

Cédric Tille. 2007. “**Exchange Rate Pass-Through to Trade Prices and External Adjustment.**” In *World Economic Outlook: Spillovers and Cycles in the Global Economy*, 100-2. April. Washington, D.C.: International Monetary Fund. ■

Papers Presented by Economists in the Research and Statistics Group

“Hedge Fund Tail Risk,” Tobias Adrian. Bendheim Center for Finance seminar, Princeton University, Princeton, New Jersey, March 27. With Markus Brunnermeier. Also presented at the Hong Kong University of Science and Technology, Kowloon, Hong Kong, March 30.

“Liquidity and Financial Cycles,” Tobias Adrian. Bendheim Center for Finance seminar, Princeton University, Princeton, New Jersey, May 7. With Hyun Shin. Also presented at the Bank for International Settlements annual conference, Brunnen, Switzerland, June 12.

“An Anatomy of China’s Export Growth,” Mary Amiti. International Monetary Fund Conference on the Global Implications of China’s Trade, Investment, and Growth, Washington, D.C., April 6. With Caroline Freund. Also presented at the conference Empirical Investigations in International Trade, University of Slovenia, Ljubljana, Slovenia, June 14.

“Credible Redistributive Policies and Migration across U.S. States,” Roc Armenter. Midwest Macroeconomics Meetings, Cleveland, Ohio, April 29. With Francesc Ortega.

“Endogenous Productivity and Development Accounting,” Roc Armenter. Pennsylvania State University Department of Economics seminar, University Park, Pennsylvania, April 11. With Amartya Lahiri.

“Over-the-Counter Search Frictions: A Case Study of the Federal Funds Market,” Adam Ashcraft. Society for Economic Dynamics annual meeting, Prague, Czech Republic, June 28. With Darrell Duffie.

“Precautionary Reserves and the Interbank Market,” Adam Ashcraft. Thirty-eighth Konstanz Seminar on Monetary Theory and Policy, Konstanz, Germany, May 24. With James McAndrews and David Skeie.

“Are Charter Schools Perceived to Be Better than Regular Public Schools? Evidence from a New Approach Using Private School Enrollment Patterns,” Rajashri Chakrabarti. American Education Research Association conference, Chicago, Illinois, April 9. With Joydeep Roy. Also presented at the Society of Labor Economists conference, Chicago, Illinois, May 4, and the Econometric Society conference, Duke University, Durham, North Carolina, June 23.

“Can State Merit Aid Programs Have Unintended Consequences? A Closer Look,” Rajashri Chakrabarti. Society of Labor Economists conference, Chicago, Illinois, May 5. With Joydeep Roy.

“The Effect of Voucher Design on Public School Performance: Evidence from Florida and Milwaukee Voucher Programs,” Rajashri Chakrabarti. New York University seminar, New York City, April 23.

“The Intended and Unintended Consequences of *No Child Left Behind*,” Rajashri Chakrabarti. American Education Research Association conference, Chicago, Illinois, April 10. Also presented at a New York University seminar, New York City, April 23, and the Econometric Society conference, Duke University, Durham, North Carolina, June 23.

“Vouchers, Public School Response, and the Role of Incentives,” Rajashri Chakrabarti. Columbia University seminar, New York City, April 4. Also presented at the American Education Research Association conference, Chicago, Illinois, April 9.

“Monetary Policy under Sudden Stops,” Vasco Cúrdia. Econometric Society conference, Duke University, Durham, North Carolina, June 24.

“Current Account Dynamics and Monetary Policy,” Andrea Ferrero. NBER Conference on International Dimensions of Monetary Policy, S’Agaró, Catalonia, Spain, June 12. With Mark Gertler and Lars Svensson.

“The Long-Run Determinants of U.S. Trade Deficits,” Andrea Ferrero. Fordham University Department of Economics seminar, Bronx, New York, April 3. Also presented at a Bank of Canada conference, Ottawa, Canada, May 29.

“Commitment and Equilibrium Bank Runs,” Todd Keister. Midwest Macroeconomics Meetings, Cleveland, Ohio, April 27. With Huberto M. Ennis. Also presented at the Society for Economic Dynamics annual meeting, Prague, Czech Republic, June 28.

“ESOP Fables: The Impact of Employee Stock Ownership Plans on Labor Disputes,” Hamid Mehran and Joseph Tracy. Ross School of Business seminar, University of Michigan, Ann Arbor, Michigan, June 9. With Peter Cramton.

“The Global Economy Model (GEM): Theoretical Framework,” Paolo Pesenti. International Monetary Fund workshop, Washington, D.C., April 19.

“The Simple Geometry of Transmission and Stabilization in Closed and Open Economies,” Paolo Pesenti. NBER and Central Bank of the Republic of Turkey conference, Istanbul, Turkey, June 16. With Giancarlo Corsetti.

“The Aggregate Implications of Indivisible Labor, Incomplete Markets, and Search Frictions,” Ayşegül Şahin. Society for Economic Dynamics annual meeting, Prague, Czech Republic, June 29. With Per Krusell, Toshihiko Mukoyama, and Richard Rogerson.

“Firms and Flexibility,” Ayşegül Şahin. Society for Computational Economics, Thirteenth International Conference on Computing in Economics and Finance, Montréal, Québec, Canada, April 27. With Bart Hobijn. Also presented at the Midwest Macroeconomics Meetings, Cleveland, Ohio, June 15.

“Labor-Market Matching with Precautionary Savings and Aggregate Fluctuations,” Ayşegül Şahin. Centre for Economic Policy Research European Summer Symposium in International Macroeconomics, Izmir, Turkey, May 14.

“Globalization and Inflation Dynamics: A Structural Perspective,” Argia Sbordone. NBER Conference on International Dimensions of Monetary Policy, S’Agaró, Catalonia, Spain, June 13.

“Firm Heterogeneity and Credit Risk Diversification,” Til Schuermann. Oesterreichische Nationalbank research seminar, Vienna, Austria, April 16. With Samuel Hanson and M. Hashem Pesaran. Also presented at a European Central Bank research seminar, Frankfurt, Germany, April 20.

“Vesting and Control in Venture Capital Contracts,” David Skeie. Journal of Financial Intermediation conference, University of Mannheim, Mannheim, Germany, April 20.

“Could Capital Gains Smooth a Current Account Rebalancing?” Cédric Tille. Bank of Canada seminar, Ottawa, Canada, April 20. With Michele Cavallo.

“International Capital Flows,” Cédric Tille. Wharton School seminar, University of Pennsylvania, Philadelphia, Pennsylvania, April 3. With Eric van Wincoop.

“How Do Financial Frictions Shape the Product Market? Evidence from Mortgage Originations,” James Vickery. New York Area Real Estate meeting, Zicklin School of Business, Baruch College, New York City, May 5. Also presented at the Western Finance Association meetings, Big Sky, Montana, June 27.

“Interest Rates and Consumer Choice in the Residential Mortgage Market,” James Vickery. Federal Reserve Bank of Chicago’s Forty-third Annual Conference on Bank Structure and Competition, Chicago, Illinois, May 18.

“Patterns of Rainfall Insurance Participation in Rural India,” James Vickery. Conference cosponsored by the Centre for Analytical Finance of the Indian Business School, the Financial Institutions Center of the University of Pennsylvania’s Wharton School, and the Swedish Institute for Financial Research, held at Wharton, Philadelphia, Pennsylvania, April 20. With Xavier Gine and Robert Townsend. ■

Upcoming Conference to Focus on Exchange Rates and Prices

On December 6-7, the Federal Reserve Bank of New York will host the conference Exchange Rates and Prices.

The sessions, which will focus on international price linkages, are intended to bring together researchers with micro-economic and macroeconomic expertise to share insights. Papers presented will address the dynamics of exchange rate

adjustments, price sensitivities, and the implications for real economic adjustment. They will center on such key topics as international pricing to market, the role of exchange rate regimes, and the implications of productivity developments.

For more information, visit www.newyorkfed.org/research/conference/2007/exrates_prices.html.

Research and Statistics Group Publications and Papers: April-June 2007

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

ECONOMIC POLICY REVIEW

Forthcoming

**The Role of Retail Banking in the U.S.
Banking Industry: Risk, Return,
and Industry Structure**

Timothy Clark, Astrid Dick, Beverly Hirtle,
Kevin Stiroh, and Robard Williams

CURRENT ISSUES IN ECONOMICS AND FINANCE, VOL. 13

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Tobias Adrian

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**How Worrisome Is a Negative
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Charles Steindel

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**Why a Dollar Depreciation May Not
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Linda Goldberg and Eleanor Wiske Dillon

STAFF REPORTS

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