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Research Update

Research and Market Analysis Group www.newyorkfed.org/research

Economic Policy Review Focuses on Exchange Rate Dynamics, Treasury Market Trends

The latest issue of the Bank's *Economic Policy Review* (May 2004) features articles on two topics of ongoing interest: exchange rate dynamics and U.S. Treasury market developments.

In "Industry-Specific Exchange Rates for the United States," Linda S. Goldberg constructs several industry-specific exchange rate indexes and analyzes the extent to which each index moves with, or diverges from, trade-weighted economywide measures. She finds that the effect of U.S. dollar moves on industry profits can be more precisely identified when using the industry-specific indexes. These indexes are superior to the trade-weighted measures because they capture changes in industry competitive conditions that result from moves in specific bilateral exchange rates.

Thomas Klitgaard and Laura Weir study the relationship between the net positions of futures market speculators and exchange rates. Their article—"Exchange Rate Changes and Net Positions of Speculators in the Futures Market"—concludes that knowing the direction of the change in a particular currency's net position gives one a 75 percent chance of correctly guessing the exchange rate's direction over that same week. However, net position data do not appear to be useful in anticipating changes over the following week.

The 1970-75 period was a milestone in the U.S. Treasury market's evolution from fixed-price offerings of notes and bonds to market-driven auctions, according to "The Institutionalization of Treasury Note and Bond Auctions, 1970-75." In this

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study, Kenneth D. Garbade explains that after two failed attempts to auction bonds and notes, the Treasury succeeded in the early 1970s. He points to three reasons for the turnaround: the Treasury's imitation of its successful bill auction process, its gradual extension of the maturity of auction offerings, and its modification of the auction process when shortcomings surfaced.

Since their introduction in 1997, Treasury inflation-indexed debt securities (TIIS) have not fulfilled a primary goal: reducing the U.S. Treasury's expected financing costs. "Treasury Inflation-Indexed Debt: A Review of the U.S. Experience," by Brian Sack and Robert Elsasser, observes that over most of the post-1997 period, TIIS yields have been surprisingly high relative to nominal Treasury yields. The authors attribute the low relative valuation of TIIS to investor difficulty adjusting to a new asset class, supply trends, the lower liquidity of indexed debt, and investor willingness to hold nominal securities with little inflation risk premium. More recently, though, TIIS market liquidity and investor participation have increased, and the relative valuation of TIIS appears to have improved.

Articles are available at **<www.newyorkfed.org/research/epr/index.html>**.

To access the databases used in the Goldberg study, visit **<www.newyorkfed.org/research/global_economy/industry_specific_exrates.html>**.

Publications and Papers

The Research and Market Analysis 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 the Group's research output.

Study Explains Last Year's Negative Interest Rates on Some "Repo" Contracts

From early August to mid-November of 2003, interest rates on certain U.S. Treasury security repurchase agreements ("repos") were often below zero. In "Repurchase Agreements with Negative Interest Rates" (***Current Issues in Economics and Finance***, vol. 10, no. 5), Michael J. Fleming and Kenneth D. Garbade argue that market participants contracted to pay interest on money they lent in order to obtain—as collateral—the securities they needed to meet delivery obligations.

The episode . . . shows that the ancillary costs of failing on an obligation to deliver Treasury securities can sometimes be significant.

As the authors explain, settlement problems in the ten-year Treasury note in the summer of 2003 set the stage for this development. Extremely low short-term interest rates, coupled with a sharp increase in intermediate-term Treasury yields, led to an extraordinary volume of settlement "fails." In a fail, a seller of securities does not meet its obligation to deliver the securities to the buyer on the scheduled date.

Under normal circumstances, there is no explicit penalty attached to a fail. By early August of 2003, however, the ancillary costs of failing were becoming significant as settlement problems in the ten-year note persisted. Dealers were incurring regulatory capital charges on "aged" fails (those more than five days overdue)—capital that could otherwise have been used to support profitable activities. Moreover, dealers were facing higher labor costs because they were forced to mobilize their back-office personnel to reduce the accumulation of unsettled trades. The failure to deliver purchased securities also led to a rise in customer dissatisfaction, creating an additional cost for dealers.

Under these circumstances, some dealers became willing to pay interest on the money they lent to borrow the ten-year note. They concluded that it would be less expensive to pay interest to borrow the notes needed to remedy their settlement fails than to continue to incur the capital charges, labor costs, and customer dissatisfaction associated with the fails.

Read the article at **<www.newyorkfed.org/research/current_issues/ci10-5.html>**.

New Titles in the *Staff Reports* Series

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

Macroeconomics and Growth

No. 182, April 2004
Benefits and Spillovers of Greater Competition in Europe: A Macroeconomic Assessment
Tamim Bayoumi, Douglas Laxton, and Paolo Pesenti

The authors estimate the benefits and spillovers of increased competition using a general-equilibrium simulation model with nominal rigidities and monopolistic competition in product and labor markets. They draw three conclusions after calibrating the model to the euro area against the rest of the industrial world. First, greater competition produces large effects on macroeconomic performance. In particular, differences in competition can account for more than half of the current gap in GDP per capita between the euro area and the United States. Second, greater competition may improve macroeconomic management by increasing wage and price responsiveness to market conditions. Third, increased competition can generate positive spillovers to the rest of the world through its effect on the terms of trade.

No. 188, June 2004
The Linkage between Regional Economic Indexes and Tax Bases: Evidence from New York
Jason Bram, Andrew F. Haughwout, James Orr, Robert Rich, and Rae Rosen

This study examines the linkage between economic activity and tax revenues for New York State and New York City. Drawing upon the methodology of Stock and Watson, the authors use a dynamic single-factor model to estimate indexes of coincident economic indicators; they also construct measures of the sales and withholding tax bases. To conduct an empirical analysis of the relationship between the indexes of economic activity and the tax base series, they use vector autoregression and error correction models. The results provide strong evidence that the coincident indexes contain useful information for explaining monthly growth in the tax bases. However, much less evidence exists of a statistically significant linkage from the tax bases to the coincident indexes.

International

No. 183, April 2004
Financial-Sector Foreign Direct Investment and Host Countries: New and Old Lessons
Linda S. Goldberg

Many lessons from foreign direct investment (FDI) research on manufacturing and extractive resource industries are applicable to FDI research on the financial sector. This paper summarizes the main findings and policy themes of FDI research, focusing on the implications of FDI for host countries, especially emerging market economies. Goldberg reviews evidence of technology transfers, productivity spillovers, wage effects, macroeconomic growth, and fiscal and tax concerns. She stresses throughout that parallel findings often arise from studies of general FDI and of financial-sector FDI. Goldberg also emphasizes important differences between FDI's effects in these sectors, particularly regarding local institution building and business cycles. She contends that these differences—more so than the similarities—should be the focus of research efforts.

Microeconomics

No. 186, May 2004
How Should Suburbs Help Their Central Cities?
Andrew F. Haughwout and Robert P. Inman

This paper examines whether suburbs should help finance the core public services of their central cities. The authors review three arguments in favor of such assistance. First, the central city provides public services that benefit suburban residents. Second, the central city may provide redistributive services to low-income central city residents that benefit suburbanites with redistributive preferences for such transfers. Third, the central city's private economy may be an efficient production center because of agglomeration economies; distributive city finances may undermine those economies by driving away businesses or residents. The authors analyze the effects of suburban transfers in a structural model of a metropolitan economy consistent with the third argument and with the city-suburban interdependence literature.

Banking and Finance

No. 181, April 2004
Time-Varying Consumption Correlation and the Dynamics of the Equity Premium: Evidence from the G-7 Countries
Asani Sarkar and Lingjia Zhang

This study examines the implications of time variation in the correlation between the equity premium and nondurable consumption growth for equity return dynamics in G-7 countries. Using a VAR-GARCH (1,1) model, the authors find that the correlation increases with recession indicators and with proxies for stock market wealth. The combined effect is that the correlation increases during a recession. The authors find that the effect of a countercyclical correlation is that the equity premium, Sharpe ratio, and risk aversion are also generally countercyclical. These findings withstand such robustness checks as allowing the mean return to depend on its conditional variance and controlling for lower consumption volatility during the post-1990 period. The evidence is stronger for countries with larger stock market capitalization relative to GDP.

No. 184, May 2004
Anomalous Bidding in Short-Term Treasury Bill Auctions
Michael J. Fleming, Kenneth D. Garbade, and Frank Keane

This paper shows that Treasury bill auction procedures create classes of price-equivalent discount rates for bills with fewer than seventy-two days to maturity. The authors argue that it is inefficient for market participants to bid at a discount rate that is not the minimum rate in its class. The inefficiency of bidding at a rate other than the minimum is related to a quantity shortfall rather than an unexploited profit opportunity. Auction results for weekly offerings of four-week bills and occasional offerings of cash management bills show that market participants frequently bid at inefficient rates. However, they are more likely to bid at efficient rates than chance would suggest.

No. 185, May 2004
A General Approach to Integrated Risk Management with Skewed, Fat-Tailed Risks
Joshua V. Rosenberg and Til Schuermann

The goal of integrated risk management in a financial institution is to measure and manage risk and capital across business activities. This requires an approach for aggregating risk types whose distributional shapes vary considerably. The authors use the method of copulas to construct the joint risk distribution for a typical large, internationally active bank. It allows them to incorporate realistic marginal distributions that capture essential empirical features of these risks—such as skewness and fat tails—while allowing for a rich dependence structure. They explore the impact of business mix and inter-risk correlations on total risk, whether measured by value at risk or expected shortfall. They find that given a risk type, total risk is more sensitive to differences in business mix or risk weights than to differences in inter-risk correlations.

Banking and Finance (continued)

No. 187, May 2004
Inference, Arbitrage, and Asset Price Volatility
Tobias Adrian

Adrian models the effect on stock prices when arbitrageurs are uncertain about the drift of the dividend process of a risky asset. Uncertain arbitrageurs condition their investment strategy on the observation of dividends and trading volume. In such a setting, they can increase the equilibrium volatility of asset returns. The arbitrageurs' inference problem leads to rich dynamics of asset prices and investment strategies: the optimal trading strategy of arbitrageurs can be upward sloping in prices, the price response to news can be nonlinear, and minor news can have large effects. These results are driven by arbitrageurs' inability to distinguish temporary from permanent shocks perfectly. They would like to sell assets in response to temporary price increases and buy in response to permanent increases.

No. 189, June 2004
Are Bank Holding Companies a Source of Strength to Their Banking Subsidiaries?
Adam B. Ashcraft

Ashcraft presents evidence that the cross-guarantee authority granted to the FDIC by the Financial Institutions Reform, Recovery, and Enforcement Act of 1989 has unexpectedly strengthened the Federal Reserve's source-of-strength doctrine. In particular, he finds that a bank affiliated with a multibank holding company is significantly safer than a stand-alone bank or a bank affiliated with a one-bank holding company. Not only does affiliation reduce the probability of financial distress, but distressed affiliated banks are more likely to receive capital injections and recover faster than other banks. Moreover, affiliation's effects are strengthened for an expanding bank holding company, but are weakened when the parent has less than full ownership of the subsidiary. Most interestingly, Ashcraft's results show that these behavior differences across affiliation did not exist before the cross-guarantee authority was introduced.

Other New Publications

The Regional Economy of Upstate New York. This quarterly newsletter, produced by the New York Fed's Buffalo Branch, focuses on issues of importance to upstate New York.

Although upstate's economy is typically associated with manufacturing, tourism is developing into an engine of growth in parts of the region. In "Tourism's Role in the Upstate New York Economy" (spring 2004), economist Richard Deitz examines the effects of the tourism industry upstate. He finds that tourism is important in such areas as Glens Falls, Jamestown, and Dutchess and Niagara counties. However, it is not an especially large factor elsewhere, nor is it growing particularly rapidly—but the industry is still a contributor to the state's local economies.

www.newyorkfed.org/research/regional_economy/upstatenews.html

Papers Presented by Economists in the Research and Market Analysis Group

"Entry into Banking Markets and the First-Mover Advantage," *Astrid Dick*. Northwestern University's Kellogg School of Management's Annual International Industrial Organization Conference, Chicago, Illinois, April 23.

"Do Distribution Margins Solve the Exchange Rate Disconnect Puzzle?" *Linda Goldberg*. Central Bank of Iceland and Société Universitaire Européenne de Recherches Financières seminar on the Interaction of Monetary and Financial Stability in Small Open Economies, Reykjavík, Iceland, June 3.

"Exchange Rate Pass-Through Implications for Small Open Economies," *Linda Goldberg*. Central Bank of Iceland and Société Universitaire Européenne de Recherches Financières seminar on the Interaction of Monetary and Financial Stability in Small Open Economies, Reykjavík, Iceland, June 4.

"Inventories and the Information Revolution: Implications for Output Volatility," *Margaret McConnell*. State University of New York at Albany Department of Economics seminar, Albany, New York, April 26. With James Kahn. Also presented at a Wesleyan University Department of Economics seminar, Middletown, Connecticut, May 5.

"Regulation, Subordinated Debt, and Incentive Features of CEO Compensation in the Banking Industry," *Hamid Mehran*. Financial Intermediation Research Society Conference on Banking, Insurance, and Intermediation, Capri, Italy, May 13. With Kose John and Yiming Qian.

"Board Committee Structures, Ownership, and Firm Performance," *Hamid Mehran*. London Business School and BSI GAMMA Foundation Corporate Governance Conference, London, England, June 4. With Rachel Hayes and Scott Schaefer.

"Benefits and Spillovers of Greater Competition in Europe: A Macroeconomic Assessment," *Paolo Pesenti*. European University Institute's Robert Schuman Centre seminar, Florence, Italy, April 1. With Tamim Bayoumi and Douglas Laxton.

"Welfare-Based Monetary Policy Rules in an Estimated Model of the U.S. Economy," *Paolo Pesenti*. International Monetary Fund Workshop on Dynamic Stochastic General Equilibrium Models, Washington, D.C., April 26. With Michel Juillard, Philippe Karam, and Douglas Laxton.

"An Introduction to General Equilibrium Open Economy Models," *Paolo Pesenti*. International Monetary Fund Workshop on Dynamic Stochastic General Equilibrium Models, Washington, D.C., April 29.

"The Global Economy Model (GEM): Design and Applications," *Paolo Pesenti*. Northwestern University and University of Quebec at Montreal Conference on Open Macroeconomics Models and Policy Analysis, Montreal, Canada, April 30. With Douglas Laxton. Extended version also presented at an International Monetary Fund Institute economics training program, Washington, D.C., June 2-3.

"Macroeconomics and Credit Risk: A Global Perspective," *Til Schuermann*. University of Montreal International Conference on Credit Risk, Montreal, Canada, April 16. With M. Hashem Pesaran, Bjorn-Jakob Treutler, and Scott M. Weiner.

"Integrated Risk Management in a Financial Conglomerate," *Til Schuermann*. World Bank Advanced Risk Management Workshop, Washington, D.C., May 18. With Andrew Kuritzkes and Joshua Rosenberg.

"Future Public Debt Accumulation and Saving in the United States," *Charles Steindel*. Bank of Italy Workshop on Public Debt, Perugia, Italy, April 1.

"Stabilization, Competitiveness, and Risk Sharing: A Model of Monetary Interdependence," *Cédric Tille*. New York University seminar, New York City, April 13. With Paolo Pesenti.

Recently Published

Tobias Adrian. 2004. "The Degree of Openness and the Costs of Fixing the Exchange Rate," with Daniel Gros. ***Economics Letters*** 83, no. 1 (April): 141-6.

Andrew Haughwout. 2004. "Local Revenue Hills: Evidence from Four U.S. Cities," with Robert Inman, Steven Craig, and Thomas Luce. ***Review of Economics and Statistics*** 86, no. 2 (May): 570-85.

Stavros Peristiani. 2004. "The Role of Bank Advisors in Mergers and Acquisitions," with Linda Allen, Julapa Jagtiani, and Anthony Saunders. ***Journal of Money, Credit, and Banking*** 36, no. 2 (April): 197-224.

Robert Rich and Joseph Tracy. 2004. "Uncertainty and Labor Contract Durations." ***Review of Economics and Statistics*** 86, no. 1 (February): 270-87.

Kevin Stiroh. 2004. "Do Community Banks Benefit from Diversification?" ***Journal of Financial Services Research*** 25, no. 2-3 (April/June): 135-60.

Giorgio Topa. 2004. "Religious Intermarriage and Socialization in the United States," with Alberto Bisin and Thierry Verdier. ***Journal of Political Economy*** 112, no. 3 (June): 615-64.

George Zanjani. 2004. "Terrorism Insurance Policy and the Public Good," with Darius Lakdawalla. ***Journal of Legal Commentary*** 18, no. 2 (spring): 463-9.

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Forthcoming in the *Economic Policy Review*

The Historical and Recent Behavior of Goods and Services Inflation
Richard W. Peach, Robert Rich, and Alexis Antoniades

Since the late 1990s, the combination of relatively high services inflation and declining goods prices has produced a record-level gap in these inflation rates. Some commentators argue that if the gap between services and goods inflation continues to expand in this manner, the outcome will be either faster overall inflation or deflation. This article examines the relationship between these divergent inflation rates from 1967 to 2002. The authors find that while the level of each inflation rate is subject to permanent shifts, the gap between services inflation and goods inflation over time remains stable. Moreover, when the gap is above its long-run value, as it currently is, equilibrium is restored through a rise in goods inflation and a slowing of services inflation. The authors' results suggest that concerns over an imminent marked acceleration or dramatic slowing in inflation may be unwarranted.

Are Home Prices the Next "Bubble"?
Jonathan McCarthy and Richard W. Peach

The strong rise in home prices since the mid-1990s has raised concerns over a possible bubble in the housing market and the effect of a sharp price decline on the U.S. economy. This article assesses two measures frequently cited to support a bubble—the rising price-to-income ratio and the declining rent-to-price ratio—and finds the measures to be flawed and the conclusions drawn from them unpersuasive. In particular, the measures do not fully account for the effects of declining nominal mortgage interest rates and fail to use appropriate home price indexes. The authors also estimate a structural model of the housing market and find that aggregate prices are not inconsistent with long-run demand fundamentals. Accordingly, they conclude that market fundamentals are strong enough to explain the recent path of home prices and that no bubble exists. Nevertheless, weakening fundamentals could have an impact on home values on the east and west coasts, where the new housing supply appears to be relatively inelastic. However, prices in these regions have typically been volatile, and previous declines have not had a sizable negative effect on the overall economy.

Both articles are available at **www.newyorkfed.org/research/epr/forthcoming.html**.

Research and Market Analysis Group Publications and Papers: April-June 2004

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

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Exchange Rate Changes and Net Positions of Speculators in the Futures Market
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Papers from the conference "Beyond Pillar 3 in International Banking Regulation: Disclosure and Market Discipline of Financial Firms," cosponsored by the Federal Reserve Bank of New York and Columbia Business School's Jerome A. Chazen Institute of International Business

Rebalancing the Three Pillars of Basel II
Jean-Charles Rochet

Disclosure, Volatility, and Transparency: An Empirical Investigation into the Value of Bank Disclosure
Ursel Baumann and Erlend Nier

Market Indicators, Bank Fragility, and Indirect Market Discipline
Reint Gropp, Jukka Vesala, and Giuseppe Vulpes

A Reconsideration of the Risk Sensitivity of U.S. Banking Organization Subordinated Debt Spreads: A Sample Selection Approach
Daniel M. Covitz, Diana Hancock, and Myron L. Kwast

Risk and Return of Publicly Held versus Privately Owned Banks
Simon H. Kwan

Current Issues in Economics and Finance, vol. 10

No. 4, April 2004
Revenue Implications of New York City's Tax System
Jesse Edgerton, Andrew F. Haughwout, and Rae Rosen
Second District Highlights

No. 5, April 2004
Repurchase Agreements with Negative Interest Rates
Michael J. Fleming and Kenneth D. Garbade

No. 6, May 2004
What Investment Patterns across Equipment and Industries Tell Us about the Recent Investment Boom and Bust
Jonathan McCarthy

No. 7, June 2004
Economic Restructuring in New York State
Erica L. Groshen, Simon Potter, and Rebecca J. Sela
Second District Highlights

Staff Reports

Available only online.

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