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Research UPDATE

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RESEARCH AND MARKET ANALYSIS GROUP

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Acceptance of New Internet Payment Method Will Hinge on System Compatibility and Risk Management

By tapping the Internet's unique potential for speed and convenience, personal on-line payments have emerged as a convenient alternative to cash, check, and credit card transactions for those wishing to initiate and confirm small retail payments. However, the ultimate success of personal on-line payments will depend on greater interoperability of the payment providers' diverse systems and on risk management, according to a new article in the ***Economic Policy Review*** ("Personal On-Line Payments," vol. 7, no. 3).

Authors Kenneth Kuttner and James McAndrews explain that all personal on-line payment systems rely on web and e-mail technologies to initiate and confirm payments. Yet the systems differ in terms of the types of accounts they access—some of which are maintained by banks, others by nonbanks. Because the latter do not participate in a common clearing system, the transmission of payments between nonbanks is a cumbersome process. Therefore, "increased acceptance of this payment method will depend on effective risk control and improved settlement arrangements among nonbank providers," observe Kuttner and McAndrews.

The authors identify several steps that nonbank on-line payment providers could take—short of adopting a common clearing system—to improve system interoperability. These include holding accounts in a common bank, using a bank to make interbank funds transfers on the providers' behalf, and establishing a clearing house arrangement for netting and settling payments.

Kuttner and McAndrews also suggest that personal on-line payments are unlikely to have a significant impact on monetary policy. However, they contend that this new payment method does raise regulatory issues related to such concerns as consumer protection rights and the insurability of deposits in the providers' on-line accounts.

Also in This Issue…

Survey of Stress Tests Casts Light on Banks' Risk Concerns

In the summer of 2000, central banks from the G-10 countries surveyed large international banks about their use of stress tests—a tool that measures how the value of a firm's portfolio will be affected by extreme financial or economic events. The object of the survey was to learn more about the types of shocks that most concern banks and to determine how banks use stress tests in their risk management programs.

In a review of the survey and its findings ("An International Survey of Stress Tests," ***Current Issues in Economics and Finance***, vol. 7, no. 10), Ingo Fender, Michael Gibson, and Patricia Mosser report that stock market crashes and emerging market crises head the list of events that concern banks. But while such scenarios are the most commonly simulated, the risks covered by respondents' stress tests span all major asset classes and all geographic areas.

According to the authors, the survey shows broad similarities in the types of risks tested by banks. Nevertheless, individual stress test scenarios differ across banks, with marked variations evident in the size of the shocks simulated and the assumptions made about cross-market effects. These variations, the authors note, reflect differences in the underlying portfolios and business lines of the institutions surveyed, as well as differences in the time horizons used in the tests.

In discussing how banks use stress tests, Fender, Gibson, and Mosser observe that banks rely on this tool to assess exposures in those asset markets where illiquid conditions and poor historical data make the use of other risk measures difficult. In addition, because stress tests provide a direct measure of a potential loss in portfolio value, bank risk managers regard the tests as an especially effective means of communicating risk to senior management.

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.
- ***Current Issues in Economics and Finance***—a newsletter-style publication offering concise and timely analyses of economic and financial topics.
- ***Second District Highlights***—a regional supplement to ***Current Issues*** covering financial and economic developments in the Federal Reserve System's Second District.
- ***Staff Reports***—technical papers intended for publication in leading economic and finance journals. This series is available only on-line.
- ***Publications & Other Research***—an annual catalogue of the Group's research output.

Recently Published

Sandra Black. 2001. "The Division of Spoils: Rent-Sharing and Discrimination in a Regulated Industry," with Philip Strahan. ***American Economic Review*** 91, no. 4 (September): 814-31.

Sandra Black. 2001. "How to Compete: The Impact of Workplace Practices and Information Technology on Productivity," with Lisa Lynch. ***Review of Economics and Statistics*** 83, no. 3 (August): 434-45.

Arturo Estrella. 2001. "Financial Innovation and the Monetary Transmission Mechanism." In Martin Schuerz and Maria Teresa Valderrama, eds., ***Aspects of the Transmission of Monetary Policy***, 111-28. Vienna: Oesterreichische Nationalbank.

Arturo Estrella. 2001. "Mixing and Matching: Prospective Financial Sector Mergers and Market Valuation." ***Journal of Banking and Finance*** 25, no. 12 (December): 2367-92.

Arturo Estrella. 2001. Comment on "A Regulatory Regime for Financial Stability," by David Llewellyn. In ***The Single Financial Market: Two Years into EMU***, 134-41. Vienna: Oesterreichische Nationalbank.

Kenneth Garbade. 2001. ***Pricing Corporate Securities as Contingent Claims***. Cambridge: MIT Press.

Linda Goldberg. 2001. "Does Foreign Ownership Contribute to Sounder Banks? The Latin American Experience," with Jennifer Crystal and B. Gerard Dages. In R. Litan, M. Pomerleano, and P. Masson, eds., ***Open Doors: Foreign Participation in Emerging Financial Systems***, 217-66. Proceedings of a joint meeting of the World Bank, the International Monetary Fund, and the Brookings Institution. Washington, D.C.: Brookings Institution.

Linda Goldberg. 2001. "Employment versus Wage Adjustment and the U.S. Dollar," with José Campa. ***Review of Economics and Statistics*** 83, no. 3 (August): 477-89.

Linda Goldberg. 2001. Comment on "Exchange Rate Variability and Investment in Canada," by Robert Lafrance and David Tessier. In ***Revisiting the Case for Flexible Exchange Rates***, 269-75. Proceedings of a conference sponsored by the Bank of Canada. Ontario, Canada: Bank of Canada.

Kenneth Kuttner. 2001. "Beyond Bipolar: A Three-Dimensional Assessment of Monetary Frameworks," with Adam S. Posen. ***International Journal of Finance and Economics*** 6, no. 4: 369-87.

Martin Lettau and Sydney Ludvigson. 2001. "Resurrecting the (C)CAPM: A Cross-Sectional Test When Risk Premia Are Time-Varying." ***Journal of Political Economy*** 109, no. 6 (December): 1238-87.

Sydney Ludvigson. 2001. "Does Buffer-Stock Saving Explain the Smoothness and Excess Sensitivity of Consumption?" with Alexander Michaelides. ***American Economic Review*** 91, no. 3 (June): 631-47.

Sydney Ludvigson. 2001. "Elasticities of Substitution in Real Business Cycle Models with Home Production," with John Y. Campbell. ***Journal of Money, Credit, and Banking*** 33, no. 4 (November): 847-75.

Donald Morgan and Kevin Stiroh. 2001. "Bond Market Discipline of Banks: The Asset Test." ***Journal of Financial Services Research*** 20, no. 2-3: 195-208.

Richard Peach and Stavros Peristiani. 2001. "Structural Change in the Mortgage Market and the Propensity to Refinance," with Paul Bennett. ***Journal of Money, Credit, and Banking*** 33, no. 4 (November): 955-75.

Paolo Pesenti. 2001. "Fundamental Determinants of the Asian Crisis: The Role of Financial Fragility and External Imbalances," with Giancarlo Corsetti and Nouriel Roubini. In Takatoshi Ito and Anne O. Krueger, eds., ***Regional and Global Capital Flows: Macroeconomic Causes and Consequences***, 11-41. NBER conference volume. Chicago: University of Chicago Press.

Simon Potter. 2001. "Nonlinear Risk," with Marcelle Chauvet. ***Macroeconomic Dynamics*** 5, no. 4 (September): 621-46.

Simon Potter. 2001. "Recent Changes in the U.S. Business Cycle," with Marcelle Chauvet. ***Manchester School of Economic and Social Studies*** 69, no. 5: 481-508.

João Santos. 2001. "Bank of England in Central Banking Theory." In Malcolm Warner, ed., ***International Encyclopedia of Business and Management***, 342-52. London: Thomson Learning.

João Santos. 2001. "O Euro e o Sistema Financeiro da Zona Euro" ("The Euro and the Financial System of the Euro-Zone"). ***Journal of the Portuguese Securities Market*** 10 (April): 119-34.

Charles Steindel. 2001. Comment on "The Productivity Paradox and the Mismeasurement of Economic Activity," by W. E. Diewert and Kevin J. Fox. In Kunio Okino and Tetsuya Inoue, eds., ***Monetary Policy in a World of Knowledge-Based Growth, Quality Change, and Uncertain Measurement***, 198-201. New York: Palgrave.

Charles Steindel and Kevin Stiroh. 2001. "Productivity: What Is It, and Why Do We Care about It?" ***Business Economics*** 36, no. 4 (October): 13-31.

Kevin Stiroh. 2001. "Do Computers Make Output Harder to Measure?" with Robert H. McGuckin. ***Journal of Technology Transfer*** 26, no. 4 (October): 295-321.

Other New Publications

- ***An Introduction to Economic Research at the Federal Reserve Bank of New York***: An html document designed to give economists interested in joining the Research and Market Analysis Group a fuller understanding of the Group's activities.

  www.newyorkfed.org/rmaghome/intro/research/rmagtoc.html

- ***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. The fall 2001 issue examines the distinctive patterns of the economic restructurings of Buffalo and Rochester.

  www.newyorkfed.org/rmaghome/regional/newsletter.html

New Titles in the *Staff Reports* Series

The following new ***Staff Reports*** are available at **www.newyorkfed.org/rmaghome/staff_rp/**.

Macroeconomics and Growth

No. 139
Is Equipment Price Deflation a Statistical Artifact?
Bart Hobijn

The author argues that equipment price deflation might be overstated because the methods used to measure it rely on the erroneous assumption of perfectly competitive markets. The main intuition behind this argument is that what these price indices might actually capture is not a price decrease but the erosion of the market power of existing vintages of machines. To illustrate this, the author introduces an endogenous growth model in which heterogeneous final goods producers can choose their technology, which is provided by monopolistically competing machine suppliers. This market structure implies that the best machines are marketed to the best workers and sold at the highest markup. In the model's economy, the endogenously determined markups are such that standard methods will tend to find equipment price deflation, even though the model exhibits no such deflation.

International

No. 140
Specialization and the Volume of Trade: Do the Data Obey the Laws?
James Harrigan

The core subjects of trade theory are the pattern and volume of trade: which goods are traded by which countries, and how much of those goods is traded. The first part of this paper discusses evidence on comparative advantage, with an emphasis on carefully connecting theoretical models with data analyses. The second part considers the theoretical foundations of the gravity model and reviews the small number of studies that have tried to test, rather than simply use, the implications of gravity. Both parts of the paper yield the same conclusion: we are still in the very early stages of empirically understanding specialization and the volume of trade, but the work to date can serve as a starting point for further research.

No. 142
One Reason Countries Pay Their Debts: Renegotiation and International Trade
Andrew K. Rose

This paper estimates the effect of sovereign debt renegotiation on international trade. Sovereign default may be associated with a subsequent decline in international trade either because creditors want to deter default by debtors, or because trade finance dries up after default. To estimate the effect, the author uses an empirical gravity model of bilateral trade and a large panel data set covering fifty years and more than 200 trading partners. The model controls for various factors that influence bilateral trade flows, including the incidence of International Monetary Fund programs. Using the dates of sovereign debt renegotiations conducted through the Paris Club as a proxy measure for sovereign default, the author finds that renegotiation is associated with an economically and statistically significant decline in bilateral trade between a debtor and its creditors. The decline is approximately 8 percent a year and persists for about fifteen years.

Banking and Finance

No. 141
Common Determinants of Bond and Stock Market Liquidity: The Impact of Financial Crises, Monetary Policy, and Mutual Fund Flows
Tarun Chordia, Asani Sarkar, and Avanidhar Subrahmanyam
The authors study common determinants of daily bid-ask spreads and trading volume for the bond and stock markets over the 1991-98 period. They find that spread changes in one market are affected by lagged spread and volume changes in both markets. Further, spread and volume changes are predictable to a considerable degree using lagged market returns, lagged interest rates, lagged spreads, and lagged volume. During financial crises, stock and bond spreads and volume are more volatile and become more highly correlated; moreover, money supply positively affects financial market liquidity, albeit with a two-week lag. During normal times, increases in mutual fund flows enhance stock market liquidity and trading volume, but during financial crises, U.S. government bond funds see higher inflows, resulting in increased bond market liquidity.

Papers Presented by Economists in the Research and Market Analysis Group

"Financial Innovation and the Monetary Transmission Mechanism," *Arturo Estrella*. Workshop of Volkswirtcshaft Abteilung, Oesterreichische Nationalbank, Vienna, Austria, November 9.

This paper lays out an analytical framework to examine the transmission mechanism and how each of several forms of financial innovation has affected the elements of the framework in recent decades.

"Distance, Time, and Specialization," *Carolyn Evans and James Harrigan*. National Bureau of Economic Research International Trade and Investment Group Conference, Palo Alto, California, December 7.

The authors present evidence that time-sensitive products are being increasingly sourced from places close to the United States, supporting their argument that distance can become more—not less—important as transport and communication costs fall.

"The Monetary Transmission Mechanism: Has It Changed?" *Marc Giannoni*. Rutgers University Department of Economics Seminar, New Brunswick, New Jersey, October 9. With Jean Boivin.

The study argues that the reduced estimated effect of exogenous interest rate fluctuations in the United States since the early 1980s can be attributed to changes in the systematic elements of monetary policy.

"'Too Big to Fail' and Market Discipline of Banks: A Cross-Sector Investigation," *Don Morgan and Kevin Stiroh*. Fifty-Second International Atlantic Economic Conference, Philadelphia, Pennsylvania, October 13. Also presented at Rutgers University Department of Economics Seminar, December 14.

Using data on bond spreads and ratings, the authors find evidence that the risk of banks seen as "too big to fail" receives more lenient pricing than the risk of smaller banks and nonbanks.

"International Dimensions of Optimal Monetary Policy," *Paolo Pesenti*. University of Wisconsin-Madison Department of Economics Seminar, Madison, Wisconsin, October 16. Also presented at Boston College Department of Economics Seminar, Boston, Massachusetts, November 7. With Giancarlo Corsetti.

The paper shows that optimal monetary rules for interdependent economics trade off a larger domestic output gap against lower import prices. Gains from international monetary cooperation are related in a nonmonotonic way to the degree of exchange rate pass-through.

"Explaining the Low U.S. Unemployment Rate of the 1990s," *Simon Potter*. New School University Seminar, New York City, October 22. With Marcelle Chauvet and Chinhui Juhn.

The authors find evidence that workers' educational levels and age, along with the long economic expansion of the 1990s, help account for the low U.S. unemployment rate in the decade.

"Welfare Reform, Economic Growth, and Disadvantaged Households in New York City," *Carol Rapaport*. Graduate Center of the City University of New York Seminar, New York City, December 4.

This study shows how the combination of strong economic growth and welfare reform resulted in a decrease in the welfare caseload and an increase in employment between 1996 and 1999 in New York City.

"Exclusive Dealing," *Chris Stefanadis*. Indiana University-Bloomington Business Economics Seminar, Bloomington, Indiana, October 28. With Jay Pil Choi.

The paper argues that free riding—rather than efficiency gains—may be the driving force behind anticompetitive exclusive dealing.

RESEARCH AND MARKET ANALYSIS GROUP PUBLICATIONS AND PAPERS: October-December 2001

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Economic Policy Review, Vol. 7, No. 3

Infrastructure and Social Welfare in Metropolitan America
Andrew F. Haughwout

The Effect of Employee Stock Options on the Evolution of Compensation in the 1990s
Hamid Mehran and Joseph Tracy

Personal On-Line Payments
Kenneth N. Kuttner and James J. McAndrews

The Effect of Interest Rate Options Hedging on Term-Structure Dynamics
John Kambhu and Patricia C. Mosser

Current Issues in Economics and Finance, Vol. 7

No. 10
An International Survey of Stress Tests
Ingo Fender, Michael S. Gibson, and Patricia C. Mosser

No. 11
The Effect of Tax Changes on Consumer Spending
Charles Steindel

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