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Research Update

Research and Statistics Group www.newyorkfed.org/research

Jiang Wang Is Named Research Group's First Resident Scholar

The Research Group has recently established a Program for Resident Scholars, designed to attract outstanding researchers to the Bank for a stay of at least one year. The resident scholars will participate fully in the Group's work, contributing to policy discussions and providing intellectual leadership by advising and collaborating with our economists.

The Group is pleased to announce that Jiang Wang, the Nanyang Technological University Professor of Finance at MIT's Sloan School of Management, has been appointed the first resident scholar. Jiang, the recipient of the Leo Melamed Prize in 1997 and the Batterymarch Fellowship in 1995, has published in the *Journal of Finance*, the *Journal of Financial Economics*, the *Journal of Political Economy*, the *Quarterly Journal of Economics*, the *Review of Economic Studies*, and the *Review of Financial Studies*.

In addition, Jiang is a research associate at the National Bureau of Economic Research. He also serves as an editor of *Quantitative Finance* and as an associate editor of the *Journal of Financial Markets* and several other journals, and is a former associate editor of the *Review of Financial Studies*. Jiang's current research focuses on asset pricing and management under market imperfections, trading volume, and market liquidity.

The Program for Resident Scholars complements our Visiting Scholars Program, in which economists from major research institutions visit the Bank to present their work and discuss our economists' research.

New Research: July-September 2004

Academics and Central Bankers Explore Third Pillar of Basel II Accord

Of the three pillars supporting the emerging, international bank capital regulation known as the Basel II Accord, the third—increased disclosure and market discipline of banks—is probably the least considered. The new issue of the Bank's ***Economic Policy Review*** (vol. 10, no. 2) sheds light on this topic by publishing the many papers and discussions from the conference "Beyond Pillar 3 in International Banking Regulation: Disclosure and Market Discipline of Financial Firms," co-organized by the Bank and Columbia Business School's Chazen Institute of International Business.

The first two pillars of Basel II—adequate bank capital and supervisory review of bank capital—have received much attention from researchers and the press. Accordingly, the conference organizers instead sought to focus on the less-known pillar: specifically, disclosure of information about prospects and risks *by* banks *to* investors and the discipline that investors apply in response.

The papers and their discussions, by academics and central bank researchers, addressed a range of questions, from the theoretical (*If the rationale for regulating banks is, or was, some market failure, can we expect more efficient market monitoring of banks now?*) to the practical (*Disclosure of what information, by which market, and how?*). On a larger scale, the presenters also considered whether market discipline is a credible concept at all, and if the globalization of financial firms makes discipline less credible, or more imperative.

Although the papers differed in technique and focus, several made a similar point: The strength of investor discipline depends on supervisory discipline, and vice versa. If investors can expect supervisors to take prompt corrective action against troubled banks, supervisors can rely on investors, via signals from bank bond and stock prices, to help identify those banks.

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.

Two Similar Economic Measures Diverge; Is One Flawed?

The 2001 recession saw a sharp divergence between two key economic indicators: the manufacturing production component of industrial production and the goods output component of GDP. The deviation was peculiar because manufacturing production and goods output, as their names suggest, appear to track the same types of activity. This phenomenon could suggest that one measure is flawed, casting doubt on the reliability of overall GDP or industrial production.

A recent analysis, however, finds no evidence of error ("The Relationship between Manufacturing Production and Goods Output," ***Current Issues in Economics and Finance***, vol. 10, no. 9). Rather, author Charles Steindel concludes that the divergence is largely consistent with long-run trends, and that it was accentuated by the strength of spending on consumer—relative to capital—goods as well as the growth of merchandising services in the sale of consumer goods.

According to Steindel, manufacturing production fell roughly 6¾ percent from June 2000 through December 2001. In the subsequent year and a half, production grew very little. By comparison, goods output saw only a small drop in the period, and it has experienced substantial growth since then.

This different behavior between arguably similar measures has caused some to question the accuracy of the indicators. However, Steindel explains that manufacturing production is in fact a different measure than goods output. Broadly speaking, goods output comprises the sales of U.S. manufacturers, plus a large amount of activity associated with the sale of all goods in the nation—most notably, the merchandising services used in the sale of imported and domestically manufactured consumer goods. Manufacturing production is a more limited measure, covering the output of U.S. factories. Thus, Steindel does not attribute the deviation to an error in one of two "similar" indicators. He suggests instead that the discrepancy during the 2001 slowdown is largely consistent with the long-run tendency of goods output to grow more strongly than manufacturing production.

The author adds that the deviation was accentuated by the strength in consumer spending relative to capital spending as well as the growing importance of merchandising services in the sale of consumer goods. "Since the output of service sector workers who bring consumer goods to market is counted in goods output but not in manufacturing production," Steindel observes, "these trends very likely helped buoy the goods output figure during the recession and beyond."

New Titles in the *Staff Reports* Series

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

Microeconomics

No. 191, July 2004
Why Use Debit Instead of Credit? Consumer Choice in a Trillion-Dollar Market
Jonathan Zinman

Debit cards are overtaking credit cards as the most prevalent form of electronic payment at the point of sale, yet the determinants of such consumer choice have received relatively little scrutiny. Several stylized facts suggest that debit-card use is driven by behavioral factors. The popular view is that debit-card use presents a puzzle for canonical economic models. However, cost-based motives for using debit cards should not be overlooked. Zinman documents robust effects of credit-card use on debit-card use and shows that such effects are consistent with a canonical model of consumer choice. Yet he also shows that it is difficult to distinguish between canonical and behavioral motives for debit-card use in public data. More generally, Zinman develops analytical frameworks for testing competing canonical and behavioral models, and finds important roles for both pecuniary and psychological motives.

No. 192, August 2004
The Incentive Effects of Higher Education Subsidies on Student Effort
Ayşegül Şahin

The author analyzes the disincentive effects of low-tuition policies on student effort. Her game-theoretic model of parent and student responses to tuition subsidies is calibrated using information from the National Longitudinal Survey of Youth 1979 and the High School and Beyond Sophomore Cohort: 1980-92. She finds that although subsidizing tuition increases enrollment rates, it reduces student effort. This follows from the fact that a high-subsidy, low-tuition policy causes an increase in the percentage of less able and less highly motivated college graduates. Additionally—and potentially more important—all students, even the more highly motivated ones, respond to lower tuition levels by decreasing their effort levels. This study adds to the literature by demonstrating how high-subsidy, low-tuition policies have disincentive effects on students' study time and adverse effects on human capital accumulation.

No. 194, September 2004
Why Did the Average Duration of Unemployment Become So Much Longer?
Toshihiko Mukoyama and Ayşegül Şahin

This paper examines the causes of the observed increase in the average duration of unemployment over the past thirty years. It first analyzes whether changes in the demographic composition of the U.S. labor force, particularly the age and gender composition, can explain this increase. The authors then consider the contribution of institutional changes, such as the change in the generosity and coverage of unemployment insurance. They find that changes in the composition of the labor force and institutional changes can only partially account for the longer duration of unemployment. A job search model is constructed and calibrated to U.S. data. The results indicate that more than 70 percent of the increase in the duration of unemployment over the past thirty years can be attributed to an increase in within-group wage inequality.

Banking and Finance

No. 190, July 2004
Estimating Probabilities of Default
Til Schuermann and Samuel Hanson

The authors conduct a systematic comparison of confidence intervals around estimated probabilities of default (PD) using several approaches from large-sample theory as well as bootstrapping. They do so for two PD estimation methods—cohort and duration (intensity)—using twenty-two years of credit ratings data. The authors find that the bootstrapped intervals for the duration-based estimates are surprisingly tight compared with the more commonly used (asymptotic) Wald interval. They also find that despite the relatively tight confidence intervals, it is impossible to distinguish notch-level PDs for investment-grade ratings. However, once the speculative-grade barrier is crossed, notch-level PDs can be distinguished quite cleanly. Conditioning on the state of the business cycle helps; it is easier to distinguish adjacent PDs in recessions than in expansions.

No. 193, September 2004
Learning about Beta: A New Look at CAPM Tests
Tobias Adrian and Francesco Franzoni

When risk-factor loadings are time-varying and unobservable, investors are forced to form beliefs about the levels of their loadings. The learning process involved in forming these beliefs has normative implications for asset-pricing tests. This paper develops an equilibrium model of learning about time-varying beta. In it, the capital asset pricing model (CAPM) works for investors' probability distribution. However, mispricing can be observed if econometricians estimate betas without accounting for the investors' learning process. The empirical implication for asset-pricing tests is that the factor loadings must be estimated as latent variables. The authors provide an empirical application of this methodology to the cross section of returns on ten book-to-market and ten size-sorted portfolios. For these assets, the data do not reject a learning-augmented version of CAPM. This model performs better than other common empirical specifications, including the Fama-French three-factor model.

Recently Published

Nicola Cetorelli. 2004. "Real Effects of Bank Competition." ***Journal of Money, Credit, and Banking*** 36, no. 3, part 2 (June): 543-58.

Arturo Estrella. 2004. "The Cyclical Behavior of Optimal Bank Capital." ***Journal of Banking and Finance*** 28, no. 6 (June): 1469-98.

Andrew Haughwout. 2004. "Land Taxation in New York: A General Equilibrium Perspective." In Amy Ellen Schwartz, ed., ***City Taxes, City Spending: Essays in Honor of Dick Netzer***, 73-94. Northampton, Mass.: Edward Elgar.

Til Schuermann. 2004. "Modeling Regional Interdependencies Using a Global Vector Error-Correcting Macroeconometric Model," with M. Hashem Pesaran and Scott Weiner (with discussions and a rejoinder). ***Journal of Business and Economic Statistics*** 22, no. 2 (April): 129-62; 175-81.

Til Schuermann. 2004. "The New Basel Capital Accord and Questions for Research," with Marc Saidenberg. In Benton E. Gup, ed., ***The New Basel Capital Accord***, 97-124. Cincinnati, OH: South-Western Educational Publishing.

Til Schuermann. 2004. "What Do We Know about Loss Given Default?" In David Shimko, ed., ***Credit Risk Models and Management***, 249-74. London: Risk Publications.

Papers Presented by Economists in the Research and Statistics Group

"Inference, Arbitrage, and Asset Price Volatility," *Tobias Adrian*. Thirty-First Annual Meeting of the European Finance Association, Maastricht, the Netherlands, August 21.

"Why Emergency Lending Facilities Go Unused," *Leonardo Bartolini*. Society for Economic Dynamics Annual Meeting, Florence, Italy, July 2. Also presented at the European Economic Association and Econometric Society Annual Meeting, Madrid, Spain, August 21.

"Simulating Fedwire Security Service," *Morten Bech*. Bank of Finland conference, Helsinki, Finland, August 26. With Kurt Johnson and Kimmo Soramäki.

"Exchange Rate Pass-Through into Developing Countries," *Linda Goldberg*. NBER International Finance and Macroeconomics Summer Institute, Cambridge, Massachusetts, July 14.

"The United States in the Global Economy," *Linda Goldberg*. Fordham University Graduate School of Business seminar, New York City, July 29.

"Overview of the International Wage Flexibility Project," *Erica Groshen*. European Central Bank conference, Frankfurt, Germany, July 7. With William Dickens, Julian Messina, Jarkko Turunen, and Melanie Ward.

"Do Drug Prices Vary across Rich and Poor Countries?" *Rebecca Hellerstein*. International AIDS Economics Network Preconference Meeting for the Fifteenth International AIDS Conference, Bangkok, Thailand, July 9.

"Unraveling the U.S. Supply Chain," *Bart Hobijn and Margaret McConnell*. Global Economic Modeling Network and International Input-Output Association Conference, Free University of Brussels, Brussels, Belgium, September 4. With Bess Rabin.

"Current Accounts and Global Rebalancing in a Multi-Country Simulation Model," *Paolo Pesenti*. NBER Preconference on G-7 Current Account Imbalances, Cambridge, Massachusetts, July 12. With Hamid Faruqee, Douglas Laxton, and Dirk Muir.

"Stabilization, Competitiveness, and Risk-Sharing: A Model of Monetary Interdependence," *Paolo Pesenti and Cédric Tille*. NBER International Finance and Macroeconomics Summer Institute, Cambridge, Massachusetts, July 16. Also presented at Cornell University, Ithaca, New York, September 22, and the European Central Bank, Frankfurt, Germany, September 27.

"Money and Modern Bank Runs," *David Skeie*. Society for Economic Dynamics Annual Meeting, Florence, Italy, July 3.

"Place of Work and Place of Residence: Informal Hiring Networks and Labor Market Outcomes," *Giorgio Topa*. Stanford Institute for Theoretical Economics seminar, Stanford University, Palo Alto, California, July 8.

Research and Statistics Group Publications and Papers: July-September 2004

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

Economic Policy Review, vol. 10, no. 2

"Beyond Pillar 3 in International Banking Regulation: Disclosure and Market Discipline of Financial Firms," papers from a conference cosponsored by the Federal Reserve Bank of New York and the Jerome A. Chazen Institute of International Business at Columbia Business School, October 2-3, 2003.

Contents include:

Conference Overview and Summary of Papers
Donald P. Morgan and Frederic S. Mishkin

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. 8, July 2004
The Evolution of U.S. Bank Branch Networks: Growth, Consolidation, and Strategy
Beverly Hirtle and Christopher Metli

No. 9, August 2004
The Relationship between Manufacturing Production and Goods Output
Charles Steindel

No. 10, September/October 2004
Reserve Accumulation: Implications for Global Capital Flows and Financial Markets
Matthew Higgins and Thomas Klitgaard

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