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Research UPDATE

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RESEARCH AND MARKET ANALYSIS GROUP

Staff Reports Series Goes Electronic

The Research and Market Analysis Group will now be making all new issues of ***Staff Reports*** available through its Internet site (**www.ny.frb.org/rmaghome/staff_rp/1999.htm**). From the site, interested readers can download the latest papers and many earlier issues in Adobe Acrobat format.

With the shift to full electronic presentation, we will no longer be distributing hard copies of individual papers in the ***Staff Reports*** series. Each issue of ***Research Update***, however, will carry brief summaries of new papers. In addition, we encourage readers to subscribe to our free Electronic Alert Service. As a subscriber to the service, you will receive e-mail listings of RMAG's latest ***Staff Reports*** and other publications. You can sign up for Electronic Alert quickly and easily by visiting **www.ny.frb.org/rmaghome**.

"Decay" Rate of Supervisory Information Supports FDICIA's Bank Exam Frequency Standards

Supervisory agencies consider bank examinations a timely and reliable source of information about an institution's financial condition and risk profile. This private information, however, is costly to acquire because it can be gathered only during the on-site exams. Therefore, it is important for supervisors and banks to know how quickly private information "decays," or loses its value.

In "Supervisory Information and the Frequency of Bank Examinations" (***Economic Policy Review***, vol. 5, no. 1), Beverly Hirtle and Jose Lopez evaluate how the length of time between bank exams affects the quality of information available to supervisors. To that end, the authors assess the amount of time it takes for private supervisory information to decay. The faster the information loses its value, they observe, the more frequently exams need to occur for supervisory agencies to have accurate information about the current condition of banks. Since 1991, the Federal Deposit Insurance Corporation Improvement Act (FDICIA) has mandated annual on-site exams for most U.S. commercial banks.

Hirtle and Lopez's analysis suggests that the information decay rate is fairly rapid. They find that private supervisory information fails to provide a useful picture of a bank's current condition after only six to twelve quarters. Moreover, the decay rate appears to be faster in years when the banking industry experiences financial difficulties, and the rate is significantly faster for troubled banks than for healthy ones. From this evidence, the authors conclude that FDICIA's requirement for annual bank exams is reasonable, particularly for banks whose initial financial condition is troubled or during times of financial stress for the banking industry.

Publications and Papers

The Research and Market Analysis Group produces a wide range of publications and discussion papers:

- ***The Economic Policy Review***—a policy-oriented research journal focusing on macroeconomic, banking, and financial market topics.
  www.ny.frb.org/rmaghome/econ_pol/1999.htm
- ***Current Issues in Economics and Finance***—a newsletter-style publication offering concise and timely analyses of economic and financial topics.
  www.ny.frb.org/rmaghome/curr_iss/1999.htm
- ***Second District Highlights***—a regional supplement to ***Current Issues*** covering financial and economic developments in the Federal Reserve System's Second District.
  www.ny.frb.org/rmaghome/curr_iss/sec_dis/index.htm
- ***Staff Reports***—technical papers presenting research findings, designed to stimulate discussion and elicit comments. These papers are intended for publication in leading economic and finance journals. ***Staff Reports*** are available only in electronic form.
  www.ny.frb.org/rmaghome/staff_rp/1999.htm
- ***Publications & Other Research***—a brochure spotlighting the Group's research output for the year.
  www.ny.frb.org/rmaghome/otherres

A New Study Explores the Theory behind Macro Markets

Uncertainty about national income growth poses significant economic risk to households all over the world. To help reduce investors' exposure to this risk, researchers have proposed a controversial new set of security markets—called macro markets—that would trade long-term claims on the income of an entire country or region.

In "Macro Markets and Financial Security" (***Economic Policy Review***, vol. 5, no. 1), Stefano Athanasoulis, Robert Shiller, and Eric van Wincoop explain the theory behind macro markets and describe how these markets would be used by the average investor.

Through macro markets, investors could buy a claim on a country's national income and then receive dividends equal to a fraction of that income for as long as the claim is held. By holding offsetting positions in domestic and foreign markets—going short in the domestic market and long in foreign markets—investors could hedge their home-country risk.

To estimate the potential risk-management benefits of macro markets, Athanasoulis, Shiller, and van Wincoop calculate the size of the country-specific risk component of per capita GDP for a sample of forty-nine countries. The results reveal that country-specific risk can be significant: after controlling for expected growth, the authors find that over a period of thirty-five years the per capita GDP of the best-performing country is likely to increase by a factor of five relative to that of the worst-performing country.

If macro markets could potentially reduce country-specific risk and create investment opportunities, why don't they already exist? The authors assert that many barriers stand in the way of market development, including investors' focus on short-term portfolio performance, sizable startup costs, and contract enforcement difficulties.

Japanese Exporters Respond to Fluctuating Yen by Adjusting Profit Margins

When exchange rates shift, exporters decide how much to adjust the prices seen by their foreign customers. This decision requires the firms to make a trade-off between maintaining profit margins and maintaining stable export sales.

According to Thomas Klitgaard, Japanese exporters balance these objectives when the yen fluctuates by changing profit margins significantly in order to moderate the exchange-rate-induced changes in the prices seen by their foreign customers ("Exchange Rates and Profit Margins: The Case of Japanese Exporters," ***Economic Policy Review***, vol. 5, no. 1). Klitgaard's conclusion is based on his analysis of Japan's industrial machinery, electrical machinery, transportation equipment, and precision equipment industries, which accounted for 75 percent of the country's exports in 1997.

In industrial machinery, electrical machinery, and transportation equipment, the author finds that Japanese exporters pass on somewhat more than half of any change in the yen to the price seen by their foreign customers; they absorb the remainder by adjusting profit margins on foreign sales. He also finds that the direction of the yen's movement has no effect on the exporters' willingness to use profit margins to stabilize prices in foreign markets. Klitgaard notes that since the beginning of the Asian currency crisis in mid-1997, only exporters in electrical machinery have changed their pricing behavior. However, he concludes that these actions were more likely due to such factors as the exporters' uncertainty about the demand of their foreign and domestic customers than to changes in how firms respond to the yen.

Recently Published

Paul Bennett. 1999. "Rational Bias in Macroeconomic Forecasts," with David Laster and In Sun Geoum. *Quarterly Journal of Economics* 114, no. 1 (February): 293-318.

Richard Deitz. 1999. "Income Variability, Uncertainty, and Housing Tenure Choice," with John Robst and Kim Marie McGoldrick. *Regional Science and Urban Economics* 29, no. 2 (March): 219-29.

Rebecca S. Demsetz and Philip E. Strahan. 1999. "The Consolidation of the Financial Services Industry: Causes, Consequences, and Implications for the Future," with Allen N. Berger. *Journal of Banking and Finance* 23, nos. 2-4 (February): 135-94.

Martin Lettau. 1999. "Rules of Thumb versus Dynamic Programming," with Harald Uhlig. *American Economic Review* 89, no. 1 (March): 148-74.

Hamid Mehran. 1998. "CEO Incentive Plans and Corporate Liquidation Policy," with George E. Nogler and Kenneth B. Schwartz. *Journal of Financial Economics* 50, no. 3 (December): 319-49.

Hamid Mehran. 1998. "The Effect of Changes in Ownership Structure on Performance: Evidence from the Thrift Industry," with Rebel A. Cole. *Journal of Financial Economics* 50, no. 3 (December): 291-318.

Paolo Pesenti and Cédric Tille. 1999. "Competitive Devaluations: A Welfare-Based Approach," with Giancarlo Corsetti and Nouriel Roubini. NBER Working Paper no. 6889 (January).

Simon M. Potter. 1999. "Bayes Factors and Nonlinearity: Evidence from Economic Time Series," with Gary Koop. *Journal of Econometrics* 88, no. 1 (February): 251-81.

Eric van Wincoop. 1999. "How Big Are Potential Welfare Gains from International Risksharing?" *Journal of International Economics* 47, no. 1 (February): 109-35.

Mortgage Rate Concentration Prompts Surge in Refinancing

Mortgage refinancings skyrocketed to record levels last year in response to modest interest rate declines. In "Mortgage Refinancing and the Concentration of Mortgage Coupons," Paul Bennett, Frank Keane, and Patricia Mosser (***Current Issues***, vol. 5, no. 4) attribute the strength of this reaction to the high concentration of mortgage loans that quite suddenly became cost effective to refinance.

The authors explain that for several years after 1993, new loans were originated at interest rates between 7 and 9 percent, resulting in a dense concentration of coupon rates. By the end of 1997, roughly 83 percent of mortgage loans fell in the 7.25 to 8.75 percent range.

As market rates on new thirty-year fixed rate loans dropped toward 7 percent in January 1998, the spread between the market rates and rates on many of these existing mortgages widened to the point where refinancing became economically advantageous. As a result, an unusually large number of homeowners chose to refinance. When rates edged down again in the second half of 1998, more loans in the 7 to 9 percent range crossed the refinancing threshold, prompting refinancing applications to rise to even higher levels.

To test the importance of rate concentration in explaining refinancings, the authors construct a series of statistical models. The model results indicate that the interest rate spread and the distribution of rates on existing mortgages together explain a sizable 77 percent of refinancings between 1990 and 1998.

The models also suggest that low unemployment—a sign of a robust economy—contributed to the sharp increase in refinancings in 1998. Strong employment very likely helped build borrower creditworthiness and lender confidence, enabling more borrowers to refinance. Finally, the high proportion of outstanding mortgages between two and five years old may have played a role in the refinancing surge. These "moderately seasoned" loans are statistically more likely to be refinanced than new or fully seasoned loans.

New Titles in the *Staff Reports* Series

The following new ***Staff Reports*** are available electronically at the Research and Market Analysis Group's web site: **www.ny.frb.org/rmaghome/staff_rp/1999.htm**.

Macroeconomics and Growth

Are Apparent Findings of Nonlinearity Due to Structural Instability in Economic Time Series? by Gary Koop and Simon M. Potter (Number 59)

Many modeling issues and policy debates in macroeconomics depend on whether macroeconomic time series are best characterized as linear or nonlinear. Koop and Potter's empirical exercise using several macroeconomic time series shows that findings of threshold-type nonlinearities could be due to structural instability.

Nonlinear Risk, by Marcelle Chauvet and Simon M. Potter (Number 61)

Chauvet and Potter propose a flexible framework for analyzing the joint time series properties of the level and volatility of expected excess stock returns. They find that a distinct business cycle pattern exists in the conditional expectation and variance of the monthly value-weighted excess returns.

Nonlinear Impulse Response Functions, by Simon M. Potter (Number 65)

The standard linear technique of impulse response function analysis is extended to the nonlinear case by defining a generalized impulse response function. Measures of persistence and asymmetry in response are constructed for a wide class of time series.

Fluctuations in Confidence and Asymmetric Business Cycles, by Simon M. Potter (Number 66)

The asymmetries found in postwar U.S. output are inconsistent with the behavior of the U.S. economy during the Great Depression. Potter concludes that this asymmetry can be attributed to a reduction in investor confidence produced by misguided government intervention during the Depression rather than to the success of postwar stabilization policy.

Structural Estimates of the U.S. Sacrifice Ratio, by Stephen G. Cecchetti and Robert W. Rich (Number 71)

Cecchetti and Rich investigate the statistical properties of the U.S. sacrifice ratio—the cumulative output loss arising from a permanent reduction in inflation. They derive estimates of the sacrifice ratio from three structural VAR models and then conduct Monte Carlo simulations to analyze their sampling distribution. The estimates are found to provide a very unreliable guide for assessing the output cost of a disinflation policy.

International

Competitive Devaluations: A Welfare-Based Approach, by Giancarlo Corsetti, Paolo Pesenti, Nouriel Roubini, and Cédric Tille (Number 58)

The authors use a three-country center-periphery model to examine the mechanism by which exchange rate shocks are transmitted across countries. They provide a choice-theoretic framework for the policy analysis and empirical assessment of competitive devaluations.

Exchange Rates and Local Labor Markets, by Linda Goldberg and Joseph Tracy (Number 63)

Goldberg and Tracy document the consequences of real exchange rate movements for the employment, hours, and hourly earnings of workers in manufacturing industries across states. The importance and size of these dollar-induced effects are found to vary considerably across industries and to be more pronounced in some U.S. regions.

The Role of Consumption Substitutability in the International Transmission of Shocks, by Cédric Tille (Number 67)

An expansionary shock that would be beneficial in a closed economy can have an adverse "beggar-thyself" effect in the country where it takes place or an adverse "beggar-thy-neighbor" effect on a neighboring country. Such effects depend significantly on the degree of substitutability between goods produced in different countries and the exact nature of the shocks.

Determinants of Currency Risk Premiums, by John A. Carlson and C. L. Osler (Number 70)

A theoretical model of exchange rate determination suggests that forward premiums are negatively related to rationally expected future exchange rate changes. Carlson and Osler provide new empirical evidence supporting the results of their model.

The Nature and Growth of Vertical Specialization in World Trade, by David Hummels, Jun Ishii, and Kei-Mu Yi (Number 72)

Vertical specialization—the use of imported inputs in producing goods that are exported—has become an increasingly important part of world trade. Estimates show that vertical specialization has grown approximately 40 percent in the last twenty-five years; today, it accounts for approximately 30 percent of world exports.

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Microeconomics

U.S. Wages in General Equilibrium: The Effects of Prices, Technology, and Factor Supplies, 1963-1991, by James Harrigan and Rita A. Balaban (Number 64)

Why has wage inequality in the United States increased in the past two decades? By estimating the general equilibrium relationship between prices, factor supplies, and wages and technology, Harrigan and Balaban find that both relative factor supply and relative price changes play an important role in explaining the growing gap in wages between high-skilled and low-skilled workers.

Banking and Finance

Do Investors Mistake a Good Company for a Good Investment? by Peter Antunovich and David S. Laster (Number 60)

If investors confused a firm's quality with its investment attractiveness, would shares of well-run companies be bid up too high and subsequently earn negative abnormal returns? The authors determine that the opposite is true: The magnitude of the abnormal returns for admired firms and the returns' persistence over five years suggest that these firms are not overpriced.

Banks' Payments-Driven Revenues, by Lawrence J. Radecki (Number 62)

The amount of fee income earned by the banking sector suggests that the significance of payments services has been greatly understated. According to Radecki, payments services account for one-third to two-fifths of the combined operating revenues of the largest banks—a finding that establishes these services as a core activity of commercial banks.

Looking beyond the CEO: Executive Compensation at Banks, by Rebecca S. Demsetz and Marc R. Saidenberg (Number 68)

The literature on executive compensation at banks has generally assumed that a single elasticity can adequately describe the sensitivity of executive pay to performance. Demsetz and Saidenberg challenge this assumption and find that the structure of compensation, and to some extent the sensitivity of pay to performance, vary across firms of different sizes and across executives with different responsibilities.

Bank Loan Sales: A New Look at the Motivations for Secondary Market Activity, by Rebecca S. Demsetz (Number 69)

This paper clarifies the benefits of an active secondary market that allows banks to transfer loans from their own books to the books of other institutions. In addition, the paper offers predictions about the future of this secondary market in a world of rapid consolidation and disappearing barriers to geographical expansion.

Liquidity in U.S. Fixed Income Markets: A Comparison of the Bid-Ask Spread in Corporate, Government, and Municipal Bond Markets, by Sugato Chakravarty and Asani Sarkar (Number 73)

Using newly available transactions data, Chakravarty and Sarkar examine the determinants of the realized bid-ask spread in the U.S. corporate, municipal, and government bond markets for the years 1995-97. They find that liquidity is an important determinant of the realized bid-ask spread in all three markets.

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Economic Policy Review

Volume 5, Number 1

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Macro Markets and Financial Security, *by Stefano Athanasoulis, Robert Shiller, and Eric van Wincoop*

Exchange Rates and Profit Margins: The Case of Japanese Exporters, *by Thomas Klitgaard*

Current Issues in Economics and Finance

Paying Electronic Bills Electronically,
by Lawrence J. Radecki and John Wenninger
Volume 5, Number 1 (January)

Second District House Prices: Why So Weak in the 1990s? *by Matthew Higgins, Carol Osler, and Anjali Sridhar*
Volume 5, Number 2 (January)
Second District Highlights

Meet the New Borrowers, *by Sandra E. Black and Donald P. Morgan*
Volume 5, Number 3 (February)

Mortgage Refinancing and the Concentration of Mortgage Coupons, *by Paul Bennett, Frank Keane, and Patricia C. Mosser*
Volume 5, Number 4 (March)

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