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THE EQUITY PREMIUM AND RETURN ON ASSETS

Recent empirical work documents a decline in the U.S. equity premium and a decline in the standard deviation of real output growth. The author investigates the link between aggregate risk and the asset returns in a dynamic production-based asset-pricing model. When calibrated to match asset return moments, the model implies that the post-1984 reduction in TFP shock volatility of 60 percent gives rise to a 40 percent decline in the equity premium. Lower macroeconomic risk post-1984 can account for a substantial fraction of the decline in the equity premium.

Working Paper 06-1, "Macroeconomic Volatility and the Equity Premium," Keith Sill, Federal Reserve Bank of Philadelphia

EXPLORING THE DYNAMICS OF PREDATORY LENDING

Regulators express growing concern over "predatory lending," which the authors take to mean lending that reduces the expected utility of borrowers. They present a rational model of consumer credit in which such lending is possible and identify the circumstances in which it arises with and without competition. Predatory lending is associated with imperfect competition, highly collateralized loans, and poorly informed borrowers. Under most circumstances competition among lenders eliminates predatory lending.

Working Paper 06-2, "Predatory Lending in a Rational World," Philip Bond, The Wharton School, University of Pennsylvania, and Visiting Scholar, Federal Reserve Bank of Philadelphia;

David K. Musto, The Wharton School, University of Pennsylvania; and Bilge Yilmaz, The Wharton School, University of Pennsylvania

DEVELOPING EMPIRICALLY VIABLE MODELS

The time series fit of dynamic stochastic general equilibrium (DSGE) models often suffers from restrictions on the long-run dynamics that are at odds with the data. Relaxing these restrictions can close the gap between DSGE models and vector autoregressions. This paper modifies a simple stochastic growth model by incorporating permanent labor supply shocks that can generate a unit root in hours worked. Using Bayesian methods the authors estimate two versions of the DSGE model: the standard specification in which hours worked are stationary and the modified version with permanent labor supply shocks. They find that the data support the latter specification.

Working Paper 06-3, "Non-Stationary Hours in a DSGE Model," Yongsung Chang, Seoul National University; Taeyoung Doh, University of Pennsylvania; and Frank Schorfheide, University of Pennsylvania, CEPR, and Visiting Scholar, Federal Reserve Bank of Philadelphia

POLICY ANALYSIS AND POTENTIALLY MISSPECIFIED MODELS

This paper proposes a novel method for conducting policy analysis with potentially misspecified dynamic stochastic general equilibrium (DSGE) models and applies it to a New Keynesian DSGE model along the lines of Christiano, Eichenbaum, and Evans (JPE 2005) and Smets and Wouters (JEEA 2003). The authors first quantify the degree of model

misspecification and then illustrate its implications for the performance of different interest-rate feedback rules. The authors find that many of the prescriptions derived from the DSGE model are robust to model misspecification.

Working Paper 06-4, "Monetary Policy Analysis with Potentially Misspecified Models," Marco Del Negro, Federal Reserve Bank of Atlanta, and Frank Schorfheide, University of Pennsylvania, and Visiting Scholar, Federal Reserve Bank of Philadelphia

REVIEWING ESTIMATION AND EVALUATION TECHNIQUES IN DSGE MODELS

This paper reviews Bayesian methods that have been developed in recent years to estimate and evaluate dynamic stochastic general equilibrium (DSGE) models. The authors consider the estimation of linearized DSGE models, the evaluation of models based on Bayesian model checking, posterior odds comparisons, and comparisons to vector autoregressions, as well as the nonlinear estimation based on a second-order accurate model solution. These methods are applied to data generated from correctly specified and mis-specified linearized DSGE models, and a DSGE model that was solved with a second-order perturbation method.

Working Paper 06-5, "Bayesian Analysis of DSGE Models," Sungbae An, University of Pennsylvania, and Frank Schorf-heide, University of Pennsylvania, and Visiting Scholar, Federal Reserve Bank of Philadelphia

THE RELATIONSHIP BETWEEN INCENTIVES TO INVENT AND INCENTIVES TO PATENT

This paper develops a simple duopoly model in which investments in R&D and patents are inputs in the production of firm rents. Patents are necessary to appropriate the returns to the firm's own R&D, but patents also create potential claims against the rents of rival firms. Analysis of the model reveals a general necessary condition for the existence of a positive correlation between the firm's R&D intensity and the number of patents it obtains. When that condition is violated, changes in exogenous parameters that induce an increase in firms' patenting can also induce a decline in R&D intensity. Such a negative relationship is more likely when (1) there is sufficient overlap in firms' technologies so that each firm's inventions are likely to infringe the patents of another firm, (2) firms are sufficiently R&D intensive, and (3) patents are cheap relative to both the cost of R&D and the value of final output.

Working Paper 06-6, "When Do More Patents Reduce R&D?," Robert Hunt, Federal Reserve Bank of Philadelphia

REVISING ESTIMATES OF THE CPI FOR TENANT RENTS

Until the end of 1977, the U.S. consumer price index for rents tended to omit rent increases when units had a change of tenants or were vacant, biasing inflation estimates downward. Beginning in 1978, the Bureau of Labor Statistics (BLS) implemented a series of methodological changes that reduced this nonresponse bias, but substantial bias remained until 1985. The authors set up a model of nonresponse bias, parameterize it, and test it using a BLS microdata set for rents. From 1940 to 1985, the official BLS CPI-W price index for tenant rents rose 3.6 percent annually; the authors argue that it should have risen 5.0 percent annually. Rents in 1940 should be only half as much as their official relative price; this has important consequences for historical measures of rent-house-price ratios and for the growth of real consumption.

Working Paper 06-7, "The CPI for Rents: A Case of Understated Inflation," Theodore M. Crone and Leonard Naka-mura, Federal Reserve Bank of Philadelphia, and Richard Voith, Econsult Corporation

DEVELOPING A SIMPLE STATE-DEPENDENT PRICING MODEL

The authors develop an analytically tractable Phillips curve based on state-dependent pricing. They differ from the existing literature by considering a local approximation around a zero inflation steady state and introducing idiosyncratic shocks. The resulting Phillips curve is a simple variation of the conventional time-dependent Calvo formulation but with some important differences. First, the model is able to match the micro evidence on both the magnitude and timing of price adjustments. Second, holding constant the frequency of price adjustment, the authors' state-dependent model exhibits greater flexibility in the aggregate price level than does the time-dependent model. On the other hand, with real rigidities present, this state-dependent pricing framework can exhibit considerable nominal stickiness, of the same order of magnitude suggested by a conventional time-dependent model.

Working Paper 06-8, "A Phillips Curve with an Ss Foundation," Mark Gertler, New York University and NBER, and John Leahy, New York University, NBER, and Visiting Scholar, Federal Reserve Bank of Philadelphia