

Globalization and Monetary Policy Institute Publications

Abstracts of Working Papers Issued from October 2008 through October 2009

No. 21

Vertical Specialization and International Business Cycle Synchronization

Costas Arkolakis and Ananth Ramanarayanan

Abstract: We explore the impact of vertical specialization—trade in goods across multiple stages of production—on the relationship between trade and international business cycle synchronization. We develop a model in which the degree of vertical specialization is endogenously determined by comparative advantage across heterogeneous goods and varies with trade barriers between countries. We show analytically that fluctuations in measured productivity in our model are not linked across countries through trade, despite the greater transmission of technology shocks implied by higher degrees of vertical specialization. In numerical simulations, we find this transmission is insufficient in generating substantial dependence of business cycle synchronization on trade intensity.

Published as “Vertical Specialization and International Business Cycle Synchronization” in *Scandinavian Journal of Economics*, vol. 111, no. 4, 2009, pp. 655–80.

No. 22

The Taylor Rule and Forecast Intervals for Exchange Rates

Jian Wang and Jason J. Wu

Abstract: This paper attacks the Meese–Rogoff (exchange rate disconnect) puzzle from a different perspective: out-of-sample interval forecasting. Most studies in the literature focus on point forecasts. In this paper, we apply Robust Semi-parametric (RS) interval forecasting to a group of Taylor rule models. Forecast intervals for twelve OECD exchange rates are generated, and modified tests of Giacomini and White (2006) are conducted to compare the performance of Taylor rule models and the random walk. Our contribution is twofold. First, we find that in general, Taylor rule models generate tighter forecast intervals than the random walk, given that their intervals cover out-of-sample exchange rate realizations equally well. This result is more pronounced at longer horizons. Our results suggest a connection between exchange rates and economic fundamentals: economic variables contain information useful in forecasting the distributions of exchange rates. The benchmark Taylor rule model is also found to perform better than the monetary and PPP models. Second, the inference framework proposed in this paper for forecast-interval evaluation can be applied in a broader context, such as inflation forecasting, not just to the models and interval forecasting methods used in this paper.

No. 23**Exchange Rate Pass-Through in a Competitive Model of Pricing-to-Market***Raphael Auer and Thomas Chaney*

Abstract: This paper extends the Mussa and Rosen (1978) model of quality-pricing under perfect competition. Exporters sell goods of different qualities to consumers who have heterogeneous preferences for quality. Production is subject to decreasing returns to scale and, therefore, supply and the toughness of competition react to cost changes brought about by exchange rate fluctuations. First, we predict that exchange rate shocks are imperfectly passed through into prices. Second, prices of low quality goods are more sensitive to exchange rate shocks than prices of high quality goods.

Third, in response to an exchange rate appreciation, the composition of exports shifts towards higher quality and more expensive goods. We test these predictions using highly disaggregated price and quantity U.S. import data. We find evidence that in response to an exchange rate appreciation, the composition of exports shifts towards high unit price goods. Therefore, exchange rate pass-through rates that are measured using aggregate data will tend to overstate the actual extent of pass-through.

Published as “Exchange Rate Pass-Through in a Competitive Model of Pricing-to-Market” in *Journal of Money, Credit and Banking*, Supplement to vol. 41, no. 1, 2009, pp. 151–75.

No. 24**How Successful Is the G7 in Managing Exchange Rates?***Marcel Fratzscher*

Abstract: The paper assesses the extent to which the Group of Seven (G7) has been successful in its management of major currencies since the 1970s. Using an event-study approach, the paper finds evidence that the G7 has been overall effective in moving the U.S. dollar, yen and euro in the intended direction at horizons of up to three months

after G7 meetings, but not at longer horizons.

While the success of the G7 is partly dependent on the market environment, it is also to a significant degree endogenous to the policy process itself. The findings indicate that the reputation and credibility of the G7, as well as its ability to form and communicate a consensus among individual G7 members, are important determinants for the G7's ability to manage major currencies. The paper concludes by analyzing the factors that help the G7 build reputation and consensus and by discussing the implications for global economic governance.

Published as “How Successful Is the G7 in Managing Exchange Rates?” in the *Journal of International Economics*, vol. 79, no. 1, 2009, pp. 78–88.

No. 25**Do China and Oil Exporters Influence Major Currency Configurations?***Marcel Fratzscher and Arnaud Mehl*

Abstract: This paper analyses the impact of the shift away from a U.S. dollar focus of systemically important emerging market economies (EMEs) on configurations between the U.S. dollar, the euro and the yen. Given the difficulty that fixed or managed U.S. dollar exchange rate regimes remain pervasive and reserve compositions mostly kept secret, the identification strategy of the paper is to analyse the market impact on major currency pairs of official statements made by EME policymakers about their exchange rate regime and reserve composition. Developing a novel database for 18 EMEs, we find that such statements not only have a statistically but also an economically significant impact on the euro, and to a lesser extent the yen against the U.S. dollar. The findings suggest that communication hinting at a weakening of EMEs' U.S. dollar focus contributed substantially to the appreciation of the euro against the U.S. dollar in recent years. Interestingly, EME policymakers appear to have become more cautious in their communication more recently. Overall, the results

underscore the growing systemic importance of EMEs for global exchange rate configurations.

Published as “Do China and Oil Exporters Influence Major Currency Configurations?” in *Journal of Comparative Economics*, vol. 37, no. 3, 2009, pp. 335–58.

No. 26

Monthly Pass-Through Ratios

Marlene Amstad and Andreas M. Fischer

Abstract: This paper estimates monthly pass-through ratios from import prices to consumer prices in real time. Conventional time series methods impose restrictions to generate exogenous shocks on exchange rates or import prices when estimating pass-through coefficients. Instead, a natural experiment based on data releases defines our shock to foreign prices. Our estimation strategy follows an event-study approach based on monthly releases in import prices. Projections from a dynamic common factor model with daily panels before and after monthly releases of import prices define the shock. This information shock allows us to recover a monthly pass-through ratio. We apply our identification procedure to Swiss prices and find strong evidence that the monthly pass-through ratio is around 0.3. Our real-time estimates yield higher pass-through ratios than time series estimates.

No. 27

International Portfolios, Capital Accumulation and Foreign Assets Dynamics

Nicolas Coeurdacier, Robert Kollmann and Philippe Martin

Abstract: Despite the liberalization of capital flows among OECD countries, equity home bias remains sizable. We depart from the two familiar explanations of equity home bias: transaction costs that impede international diversification, and terms of trade responses to supply shocks that provide risk sharing, so that there is little incentive

to hold diversified portfolios. We show that the interaction of the following ingredients generates a realistic equity home bias: capital accumulation, shocks to the efficiency of physical investment, as well as international trade in stocks and bonds. In our model, domestic stocks are used to hedge fluctuations in local wage income. Terms of trade risk is hedged using bonds denominated in local goods and in foreign goods. In contrast to related models, the low level of international diversification does not depend on strongly countercyclical terms of trade. The model also reproduces the cyclical dynamics of foreign asset positions and of international capital flows.

Published as “International Portfolios, Capital Accumulation and Foreign Assets Dynamics” in *Journal of International Economics*, vol. 80, no. 1, 2010, pp. 100–12.

No. 28

Investment and Trade Patterns in a Sticky-Price, Open-Economy Model

Enrique Martínez-García and Jens Søndergaard

Abstract: This paper develops a tractable two-country DSGE model with sticky prices à la Calvo (1983) and local-currency pricing. We analyze the capital investment decision in the presence of adjustment costs of two types, the capital adjustment cost (CAC) specification and the investment adjustment cost (IAC) specification. We compare the investment and trade patterns with adjustment costs against those of a model without adjustment costs and with (quasi-) flexible prices. We show that having adjustment costs results into more volatile consumption and net exports, and less volatile investment. We document three important facts on U.S. trade: a) the S-shaped cross-correlation function between real GDP and the real net exports share, b) the J-curve between terms of trade and net exports, and c) the weak and S-shaped cross-correlation between real GDP and terms of trade. We find that adding adjustment

costs tends to reduce the model's ability to match these stylized facts. Nominal rigidities cannot account for these features either.

Published as “Investment and Trade Patterns in a Sticky-Price, Open-Economy Model” in *The Economics of Imperfect Markets: The Effect of Market Imperfections on Economic Decision-Making*, Giorgio Calzavara and Enrico Saltari, ed., New York: Springer, 2009

No. 29

Monetary Policy Strategy in a Global Environment

Philippe Moutot and Giovanni Vitale

Abstract: Since the mid-1980s the world economy has gone through profound transformations of which the sources and effects are probably not yet completely understood. The process of continuous integration in trade, production and financial markets across countries and economic regions—which is what is generally defined as “globalization”—affects directly the conduct of monetary policy in a variety of respects. The aim of this paper is to present an overview of the structural implications of globalization for the domestic economies of developed countries and to deduct from these implications lessons for the conduct of monetary policy, and in particular the assessment of risks to price stability.

Published as “Monetary Policy Strategy in a Global Environment,” European Central Bank, Occasional Paper, no. 106, August 2009.

No. 30

Insulation Impossible: Fiscal Spillovers in a Monetary Union

Russell Cooper, Hubert Kempf and Dan Peled

Abstract: This paper studies the effects of monetary policy rules in a monetary union. The focus of the analysis is on the interaction between the fiscal policy of member countries (regions) and the cen-

tral monetary authority. When capital markets are integrated, the fiscal policy of one country will influence equilibrium wages and interest rates. Thus, there are fiscal spillovers within a federation. The magnitude and direction of these spillovers, in particular the presence of a crowding out effect, can be influenced by the choice of monetary policy rules. We find that there does not exist a monetary policy rule that completely insulates agents in one region from fiscal policy in another. Some familiar policy rules, such as pegging an interest rate, can provide partial insulation.

No. 31

Fiscal Stabilization with Partial Exchange Rate Pass-Through

Erasmus K. Kersting

Abstract: This paper examines the role of fiscal stabilization policy in a two-country framework that allows for a general degree of exchange rate pass-through. I derive analytical solutions for optimal monetary and fiscal policy which are shown to depend on the degree of pass-through. In the case of partial pass-through, an optimizing policymaker uses countercyclical fiscal stabilization in addition to monetary stabilization. However, in the extreme cases of complete or zero pass-through, the fiscal stabilization instrument is not employed. There is also no additional gain from the fiscal instrument in the case of coordination between the two countries. These results are due to the specific way the optimal fiscal policy rule affects marginal costs: Rather than being a substitute for monetary policy, fiscal policy complements it by increasing the correlation of the marginal cost terms within and across countries. This in turn makes monetary policy more effective at stabilizing them.

No. 32

Has Globalization Transformed U.S. Macroeconomic Dynamics?

Fabio Milani

Abstract: This paper estimates a structural New Keynesian model to test whether globalization has changed the behavior of U.S. macroeconomic variables. Several key coefficients in the model—such as the slopes of the Phillips and IS curves, the sensitivities of domestic inflation and output to “global” output, and so forth—are allowed in the estimation to depend on the extent of globalization (modeled as the changing degree of openness to trade of the economy), and, therefore, they become time-varying. The empirical results indicate that globalization can explain only a small part of the reduction in the slope of the Phillips curve. The sensitivity of U.S. inflation to global measures of output may have increased over the sample, but it remains very small. The changes in the IS curve caused by globalization are similarly modest. Globalization does not seem to have led to an attenuation in the effects of monetary policy shocks. The nested closed economy specification still appears to provide a substantially better fit of U.S. data than various open economy specifications with time-varying degrees of openness. Some time variation in the model coefficients over the postwar sample exists, particularly in the volatilities of the shocks, but it is unlikely to be related to globalization.

No. 33

Global Slack and Domestic Inflation Rates: A Structural Investigation for G-7 Countries

Fabio Milani

Abstract: Recent papers have argued that one implication of globalization is that domestic inflation rates may have now become more a function of “global,” rather than domestic, economic conditions, as postulated by closed-economy Phillips curves. This paper aims to assess the empirical importance of global output in determining

domestic inflation rates by estimating a structural model for a sample of G-7 economies. The model can capture the potential effects of global output fluctuations on both the aggregate supply and the aggregate demand relations in the economy, and it is estimated using full-information Bayesian methods. The empirical results reveal a significant effect of global output on aggregate demand in most countries. Through this channel, global economic conditions can indirectly affect inflation. The results, instead, do not seem to provide evidence in favor of altering domestic Phillips curves to include global slack as an additional driving variable for inflation.

No. 34

Should Monetary Policy “Lean or Clean”?

William R. White

Abstract: It has been contended by many in the central banking community that monetary policy would not be effective in “leaning” against the upswing of a credit cycle (the boom) but that lower interest rates would be effective in “cleaning” up (the bust) afterwards. In this paper, these two propositions (can’t lean, but can clean) are examined and found seriously deficient. In particular, it is contended in this paper that monetary policies designed solely to deal with short-term problems of insufficient demand could make medium-term problems worse by encouraging a buildup of debt that cannot be sustained over time. The conclusion reached is that monetary policy should be more focused on “preemptive tightening” to moderate credit bubbles than on “preemptive easing” to deal with the aftereffects. There is a need for a new macrofinancial stability framework that would use both regulatory and monetary instruments to resist credit bubbles and thus promote sustainable economic growth over time.

No. 35**European Hoarding: Currency Use Among Immigrants in Switzerland***Andreas M. Fischer*

Abstract: Do immigrants have a higher demand for large-denominated banknotes than natives? This study examines whether cash orders for CHF 1000 notes, a banknote not used for daily transactions, is concentrated in Swiss cities with a high foreign-to-native ratio. Controlling for a range of socio-economic indicators across 250 Swiss cities, European immigrants in Switzerland are found to hoard fewer CHF 1000 banknotes than natives. A 1 percent increase in the immigrant-to-native ratio leads to a reduction in currency orders by CHF 4000. This negative correlation between immigrant-to-native ratio and currency orders for CHF 1000 notes holds irrespective of the European immigrants' country of origin. Hoarding of large-denominated banknotes by natives is attributed to tax avoidance.

No. 36**Can Long-Horizon Forecasts Beat the Random Walk Under the Engel–West Explanation?***Charles Engel, Jian Wang and Jason Wu*

Abstract: Engel and West (EW, 2005) argue that as the discount factor gets closer to one, present-value asset pricing models place greater weight on future fundamentals. Consequently, current fundamentals have very weak forecasting power and exchange rates appear to follow approximately a random walk. We connect the Engel–West explanation to the studies of exchange rates with long-horizon regressions. We find that under EW's assumption that fundamentals are I(1) and observable to the econometrician, long-horizon regressions generally do not have significant forecasting power. However, when EW's assumptions are violated in a particular way, our analytical results show that there can be substantial power improvements for long-horizon regressions, even

if the power of the corresponding short-horizon regression is low. We simulate population R-squared for long-horizon regressions in the latter setting, using Monetary and Taylor rule models of exchange rates calibrated to the data. Simulations show that long-horizon regression can have substantial forecasting power for exchange rates.

No. 37**Global, Local, and Contagious Investor Sentiment***Malcolm Baker, Jeffrey Wurgler and Yu Yuan*

Abstract: We construct indexes of investor sentiment for six major stock markets and decompose them into one global and six local indexes. Relative market sentiment is correlated with the relative prices of dual-listed companies, validating the indexes. Both global and local sentiment are contrarian predictors of the time series of major markets' returns. They are also contrarian predictors of the time series of cross-sectional returns within major markets: When sentiment from either global or local sources is high, future returns are low on various categories of difficult-to-arbitrage and difficult-to-value stocks. Sentiment appears to be contagious across markets based on tests involving capital flows, and this presumably contributes to the global component of sentiment.

No. 38**A Model of International Cities: Implications for Real Exchange Rates***Mario J. Crucini and Hakan Yilmazkuday*

Abstract: We develop a model of cities each inhabited by two agents, one specializing in manufacturing, the other in retail distribution. The distribution sector represents the physical transformation of all internationally traded goods from the factory gate to the final consumer. Using a panel of micro-prices at the city level, we decompose the cross-sectional variance of long-run LOP deviations into the fraction due to distribution costs, trade costs and a residual. For the median good, trade costs account

for 50 percent of the variance, distribution costs account for 10 percent with 40 percent of the variance unexplained. Since the sample of items in the data are heavily skewed toward traded goods, we also decompose the variance based on the median good on an expenditure-weighted basis. Now the tables turn, with distribution costs accounting for 43 percent, trade costs 36 percent and 21 percent of the variance unexplained.

No. 39

State-Dependent Pricing, Local-Currency Pricing, and Exchange Rate Pass-Through

Anthony Landry

Abstract: This paper presents a two-country DSGE model with state-dependent pricing as in Dotsey, King, and Wolman (1999) in which firms price-discriminate across countries by setting prices in local currency. In this model, a domestic monetary expansion has greater spillover effects to foreign prices and foreign economic activity than an otherwise identical model with time-dependent pricing. In addition, the predictions of the state-dependent pricing model match the business-cycle moments better than the predictions of the time-dependent pricing model when driven by monetary policy shocks.

No. 40

Business Cycles and Remittances: Can the Beveridge–Nelson Decomposition Provide New Evidence?

Roberto Coronado

Abstract: In this paper, I analyze the business cycle properties of remittances and output series for three pairs of countries: United States–Mexico, United States–El Salvador, and Germany–Turkey. Using an unobserved components state-space model (via the Beveridge–Nelson decomposition), I decompose the remittances and output series into stochastic permanent and cyclical components. I then use the resulting stationary cyclical

components to estimate co-movements between remittances and output series. Empirical results indicate that remittances are countercyclical with all the home countries: Mexico, El Salvador and Turkey. With respect to source countries, remittances to Mexico are countercyclical with the United States business cycle, while remittances from the United States to El Salvador and remittances from Germany to Turkey are strongly procyclical with output fluctuations in the source country. The contribution of this paper to the literature is twofold: (1) I use high-frequency data (quarterly) for a relatively long period of time; and (2) I employ more recent and sophisticated econometric techniques in the decomposition of the series into stochastic permanent and cyclical components. The existing literature lacks both of these important aspects of my analysis. I show that once both of these factors are incorporated into the analysis, empirical results are more aligned to those predicted by economic theory.

Working Papers Issued from October 2007 through September 2008

No. 1

Is Openness Inflationary? Imperfect Competition and Monetary Market Power

Richard W. Evans

No. 2

A Monetary Model of the Exchange Rate with Informational Frictions

Enrique Martínez-García

Published as “A Model of the Exchange Rate with Informational Frictions,” in *B.E. Journal of Macroeconomics*, vol. 10, no. 1, 2010, Contributions, Article 2.

No. 3

International Trade in Durable Goods: Understanding Volatility, Cyclicalities, and Elasticities

Charles Engel and Jian Wang

No. 4**Cross-Border Returns Differentials**

Stephanie E. Curcuru, Tomas Dvorak and Francis E. Warnock

Published as "Cross Border Returns Differentials" in *Quarterly Journal of Economics*, vol. 123, no. 4, 2008, pp. 1495–1530.

No. 5**Production Sharing and Real Business Cycles in a Small Open Economy**

José Joaquín López

No. 6**Driving Forces of the Canadian Economy: An Accounting Exercise**

Simona E. Cociuba and Alexander Ueberfeldt

No. 7**Accounting for Persistence and Volatility of Good-Level Real Exchange Rates: The Role of Sticky Information**

Mario J. Crucini, Mototsugu Shintani and Takayuki Tsuruga

Published as "Accounting for Persistence and Volatility of Good-Level Real Exchange Rates: The Role of Sticky Information" in *Journal of International Economics*, In press accepted manuscript, 2010, doi:10.1016/j.jinteco.2010.01.003.

No. 8**How Should Central Banks Define Price Stability?**

Mark A. Wynne

No. 9**Country Portfolios in Open Economy Macro Models**

Michael B. Devereux and Alan Sutherland

No. 10**Vehicle Currency**

Michael B. Devereux and Shouyong Shi

No. 11**Globalization and Monetary Policy: An Introduction**

Enrique Martínez-García

No. 12**Financial Globalization, Governance, and the Evolution of the Home Bias**

Bong-Chan Kho, René M. Stulz and Francis E. Warnock

Published as "Financial Globalization, Governance, and the Evolution of the Home Bias" in *Journal of Accounting Research*, vol. 47, no. 2, 2009, pp. 597–635.

No. 13**Globalization, Domestic Inflation and Global Output Gaps: Evidence from the Euro Area**

Alessandro Calza

No. 14**The Effect of Trade with Low-Income Countries on U.S. Industry**

Raphael Auer and Andreas M. Fischer

No. 15**Variety, Globalization, and Social Efficiency**

W. Michael Cox and Roy J. Ruffin

No. 16**Technical Note on 'The Real Exchange Rate in Sticky Price Models: Does Investment Matter?'**

Enrique Martínez-García and Jens Søndergaard

No. 17**The Real Exchange Rate in Sticky Price Models: Does Investment Matter?**

Enrique Martínez-García and Jens Søndergaard

No. 18**Some Preliminary Evidence on the Globalization–Inflation Nexus**

Sophie Guilloux and Enisse Kharroubi

No. 19**Default and the Maturity Structure in Sovereign Bonds**

Cristina Arellano and Ananth Ramanarayanan

No. 20**An International Perspective on Oil Price Shocks and U.S. Economic Activity**

Nathan S. Balke, Stephen P. A. Brown and Mine K. Yücel