



Guest editorial

Foreign exchange markets: Overview of the special issue

1. Introduction

Two decades ago exchange-rate economics seemed to be in total shambles. That, however, did not last long.

Science proceeds by successive approximations and in the intervening years the foreign exchange market became one of the most heavily researched areas in economics.

The first wave of findings to come out of this new research concerned the centuries-old theoretical construct of purchasing power parity, and, relatedly, the behavior of real exchange rates. Here the consensus gradually shifted from the widespread view that PPP had collapsed to the view that it was, in fact, a “useful empirical first empirical approximation” in the long-run, as [Lothian and Taylor \(1996\)](#) put it.

In an introduction to the *JIMF* conference issue on exchange-rate modeling published in 1998, one of us wrote ([Koedijk, 1998](#))¹:

“Ten years of data and estimation techniques later the outlook is less bleak. At least in the medium-run a predictable relationship between exchange rates and economic fundamentals has re-emerged and reintroduced tempered optimism in exchange rate economics.”

While these studies may have solved one puzzle, they highlighted another – a seemingly much too slow adjustment of real exchange rates to their equilibrium levels, the “PPP puzzle.” Other research, extending back to the early years of the post-Bretton-Woods float pointed to several other major anomalies. One was the seemingly perverse behavior of the uncovered interest parity relationship, the “UIP puzzle.” A second was the rather consistent finding of little relationships between nominal exchange rates and fundamentals in shorter term data, the “exchange rate disconnect puzzle” as [Obstfeld and Rogoff \(2000\)](#) later termed it.

Even as this latter phrase was being coined, however, new research began to emerge suggesting that our knowledge of both phenomena was not quite as limited as many economists had

¹ For a recent review of the PPP literature see [Taylor and Taylor \(2004\)](#).

thought. One example is the set of more recent findings showing much faster estimated speeds of adjustment of real exchange rates to equilibrium once transaction costs and/or changes in equilibria were allowed to enter the picture (Imbs et al., 2005; Lothian and Taylor, 2005; Taylor and Peel, 2000).

Other areas in the broader field of foreign-exchange-market economics also began to make substantial progress both through enhancements in modeling and methodology, and the use of better data. Increasing cross-fertilization with related disciplines, such as asset pricing and market microstructure, began to yield insights outside the scope of traditional macroeconomic exchange-rate research. The disappearance of exchange rates within the euro area seems to have spurred rather than restrained academic research on the question of exchange rates.

The papers collected in this special issue provide additional pieces to some of the puzzles that we have described. All are refereed versions of papers presented at the conference on “Foreign Exchange Markets” in San Juan in March 2005. The conference was sponsored by *JIMF* in conjunction with The Frank J. Petrilli Center for Research in International Finance at Fordham University and The Trans-Atlantic Finance Institute.² The conference aimed at bringing together major new research advancements in various fields related to foreign exchange markets. The papers essentially cover three distinct themes: (i) uncovered interest parity and the forward premium, (ii) exchange rate volatility and risk, and (iii) exchange rate communication and high-frequency behavior. The next section provides a brief overview of these contributions.

2. Evidence on foreign-exchange-market behavior

In “The (Partial) Rehabilitation of Interest Rate Parity in the Floating Rate Era: Longer Horizons, Alternative Expectations, and Emerging Markets,” Menzie D. Chinn reviews and extends the recent literature on uncovered interest parity. In the past decade several studies have emerged that shed new light on the common belief that the UIP tenet is empirically irrelevant. The paper focuses on four distinct bodies of new empirical evidence: (i) results of standard unbiasedness regressions over short horizons for recent periods, (ii) results of long-horizon unbiasedness regressions, (iii) results of survey based analyses of long-horizon UIP, and (iv) results of emerging market tests of the unbiasedness hypothesis. Only for the major currencies investigated in (i) do short-term interest differentials remain badly biased predictors of the ex post changes in the exchange rate. Chinn, therefore, concludes that the evidence against UIP in the current floating rate era is much weaker than commonly thought.

Richard T. Baillie and Rehim Kılıç shed further light on the UIP puzzle, aka “forward-premium anomaly,” by investigating nonlinearities in the UIP relationship that are consistent with recent theoretical literature on the role of transactions costs and limits to speculation in foreign exchange markets. In “Do Asymmetric and Nonlinear Adjustments Explain the Forward

² The Trans-Atlantic Finance Institute is a new research institute established by Erasmus University Rotterdam and Fordham University to promote and stimulate academic research in the area of international finance and to encourage interaction between the scholarly communities in Europe and the United States (see www.tafi.org).

Premium Anomaly?” the authors estimate Logistic Smooth Transition Dynamic Regression (LSTR) models with a variety of transition variables, including the lagged forward premium, monetary and income fundamentals, as well as variables associated with time varying risk premia. In their analysis, Baillie and Kılıç use monthly data on spot exchange rates and one-month forward exchange rates for nine currencies during the period 1978–2002. The authors consider a wide number of specifications and show that many of the estimated LSTR models provide evidence for the existence of an outer regime that is consistent with UIP. Standard forward premium regressions on observations falling in these regimes across the sample yield support for the UIP hypothesis in the outer regime. Furthermore, simulations indicate that an LSTR dgp can produce data consistent with the anomaly. However, the high level of uncertainty involved in estimating the transition parameters results in imprecise definitions of regimes. The authors conclude that their results add to the understanding of the nonlinear dimension of the forward premium anomaly.

Recent developments in the asset pricing literature emphasize the importance of heterogeneous beliefs in understanding the formation of asset prices. In line with these insights, Eric O’N. Fisher introduces heterogeneous expectations in a model of bond prices in his paper “The Forward Premium in a Model with Heterogeneous Prior Beliefs.” In this model, agents have diverse prior beliefs about domestic and foreign inflation. This implies that while the forward premium reflects expected differences in inflation in the long run, the premium depends on the heterogeneity of prior beliefs in the short run. Hence, in the presence of diverse prior belief about a country’s inflation process among different agents, its currency carries a forward premium that dissolves in the long run. The author presents empirical support for a model with heterogeneous beliefs using data on the dollar–mark premium from the 1980s. The model, and future extensions of it, will lead to a better understanding of the forward premium puzzle.

The paper “Asset Price Based Estimates of Sterling Exchange Rate Risk Premia” by Jan J.J. Groen and Ravi Balakrishnan presents estimates of foreign exchange risk premia in a setting that involves a utility-maximizing representative global investor with a utility function that exhibits habit persistence. Estimated risk premia are based on a conditional factor model for the stochastic discount factor that includes the real return on a global stock portfolio and the growth rate in global industrial production. Model parameters vary with the slope of the global term structure of interest rates and the global price/earnings ratio. The authors estimate and test the model for the exchange rates of the British pound versus the Australian dollar, the Canadian dollar, a “synthetic” euro, the Japanese yen, and the U.S. dollar based on monthly data for the period 1987–2001. The estimated risk premia exhibit realistic time-series dynamics. However, deviations from uncovered interest rate parity can only be explained for the sterling/yen exchange rate.

In their paper “The Long-Run Volatility Puzzle of the Real Exchange Rate” Ricardo Hausmann, Ugo Panizza, and Roberto Rigobon study cross-country differences in the volatility of the real exchange rate. At the outset of the paper, the authors provide evidence showing real-exchange-rate volatility in developing countries to be approximately three times that of industrial countries. They then go on to examine three potential explanations for this difference: (i) developing countries face larger shocks (both real and nominal), (ii) developing countries have recurrent currency crises, and (iii) developing countries have different elasticities to these shocks. In an empirical analysis of yearly real exchange rates of 74 industrialized and developing countries over the period 1980–2000, the authors show that none of these provides a satisfactory explanation for the volatility differential. A further interesting finding is that estimation

of an ARCH model indicates that developing countries have a higher persistence in deviations of the variance of real exchange rates from their long run value when the economy suffers shocks of various kinds.

Most economists would agree that institutional factors matter for the possibility and the extent of a currency crisis. Yet, empirical evidence on this supposition is relatively scarce. The paper “Currency Crises and Institutions,” written by Pattama L. Shimpalee and Janice Boucher Breuer, attempts to fill this void. The authors study over 30 countries covering 13 institutional factors for the period 1984–2002. They address the questions of which institutional factors affect the likelihood of a crisis occurring and which factors influence the depth of a crisis (as measured by a decline in output). The findings indicate that both institutional and economic factors have an impact on the probability of currency crises and that worse institutions are associated with bigger output contractions. In particular, the probability of a crisis is positively related to corruption, a *de facto* fixed exchange rate regime, weak government stability, and weak law and order. Mixed evidence is presented that deposit insurance, the removal of capital controls, a lack of central bank independence, financial liberalization, and civil law increase the chance of crisis. Factors that worsen the contraction in output during a crisis are similar, with the exception of deposit insurance, which moderates the contraction in output.

Exchange rate communication has become increasingly important as a policy tool for monetary authorities over the past decade. While there is a substantial body of research on the effectiveness of foreign exchange market interventions, the effects of this alternative policy tool have received limited attention in the literature. Marcel Fratzscher examines the long-term effectiveness of both communication and interventions in the paper “On the Long-Term Effectiveness of Exchange Rate Communication and Interventions.” The author assesses how permanent and long-lasting the effects of oral and actual interventions are and focuses on the monetary authorities of the U.S., Japan, and the euro area. The empirical analysis is based on all relevant policy statements from Reuters News in the post-1990 period. In addition to reporting a significant contemporaneous effect of communication on exchange rates, the paper shows that exchange rate communication has moved forward exchange rates up to a horizon of six months in the desired direction. A key result of the analysis is that communication generally reduces exchange rate volatility, while interventions lead to increased volatility. The paper contends that communication can be regarded as a fairly effective policy tool over the medium-term.

A rapidly growing body of literature examines the question of whether macroeconomic news can explain exchange rate fluctuations at high frequencies. Kathryn M.E. Dominguez and Freyan Panthaki contribute to this literature by investigating the role of a much wider array of news events in their paper “What Defines ‘News’ in Foreign Exchange Markets?” The authors address the question whether the traditional sets of macro surprises are the only sorts of news that can explain exchange rate movements. Using Reuters’ time-stamped newswire reports, they study the intra-daily influence of all news stories that provide information relevant to foreign exchange markets, including events not typically considered “fundamentals” in the context of standard models of exchange rate determination. The data set consists of transaction prices and quote spreads in the (U.S.) dollar–euro and dollar–pound markets from the Reuters D2000-2 electronic trading system. In addition, the paper investigates the indirect effect of news on exchange rates via order flow (signed trade volume). The empirical evidence indicates that both non-fundamental news and order flow add significantly to understanding high-frequency movements in exchange rates.

3. Conclusions

Researchers in the field of foreign exchange markets have worked hard to understand the behavior of nominal and real exchange rates and the mechanics of the markets in which nominal exchange rates are determined.

JIMF has played a continual role in this process, via both the research that it has published and the conferences that it has sponsored to bring researchers together to share ideas. The purpose of this special issue is to extend these lines of research and to create fruitful avenues for further academic work on the subject.

The three papers in this issue that deal with uncovered interest parity, although they do not solve the UIP puzzle completely, provide some important pieces to it. They demonstrate that our understanding of UIP increases considerably when we either take into account data for more recent years, longer horizons or emerging markets, use survey data to measure anticipated exchange-rate rather than actual values, use models that allow for nonlinearities in the UIP relationship, or incorporate heterogeneous beliefs into models of bond prices.

The two high-frequency studies of exchange rate fluctuations contained in this special issue reveal important effects of oral interventions by monetary authorities as well as of a much wider array of news events than previously reported. They thus add to the new second-generation body of high-frequency literature, which goes beyond pure description of the data to try to discover the links between traders' behavior and the flow of economic information. This literature, as two of the more prominent contributors to it have recently argued (Evans and Lyons, 2005), is now beginning to supply some major pieces to the "exchange-rate disconnect" puzzle. Thus providing evidence of macroeconomic influences on exchange rates at short horizons of the sort that the PPP studies have provided at much longer horizons.

Further empirical evidence presented in this special issue indicates that realistic exchange rate premia can be obtained using asset pricing models, that both the probability and the extent of currency crises are related to institutional factors as well as country-specific economic factors and that, in what amounts to a new puzzle of sorts, differences in exchange rate volatilities between developing and industrial countries cannot readily be ascribed to differences in real and nominal shocks.

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