

Introduction

As is widely known, exchange rate analysis lies at the center of the IMF's policy advice, program design, and surveillance mandate. What is perhaps less well known is the sheer variety and volume of exchange rate issues that IMF staff are called upon to analyze in various member countries, from the smallest to the largest, from the least economically developed to the most advanced, and from those whose currencies circulate only locally to those whose currencies are of global importance. Each year, IMF staff produce dozens of studies on exchange rate issues, some published by the IMF, others in various professional journals or books. It would be well beyond the scope of any single book or publication to include them all.

The purpose of the present volume, therefore, is more modest: to give a flavor of the topics IMF staff typically examine under the broad rubric of exchange rate analysis. It is organized in three main parts: the determination and impact of the real exchange rate, assessing competitiveness and the equilibrium real exchange rate in specific countries or country groups, and considerations in the choice of exchange rate regime.

Determination and Impact of the Real Exchange Rate

The volume begins with a look by Paul Cashin and his coauthors in Chapter 1 at one of the main determinants of the real exchange rate in many developing countries, namely, commodity prices. Using a panel of some 58 developing countries over the period 1980–2002, these authors find strong evidence of cointegration between commodity prices and real exchange rates of commodity-dependent countries. The study has a number of important implications, both for modeling and analyzing real exchange rates—in which, obviously, inclusion of commodity prices is vital—and for policy recommendations, for example, on the choice of exchange rate regime.

Next, Atish Ghosh and his coauthors focus in Chapter 2 on the impact of the exchange rate on trade balance adjustment in a panel of 46 emerg-

ing market countries over the period 1980–2005. Given how central is the effect of exchange rate movements on the trade balance, it is surprising that few academic papers study this question—though several look at exports or imports individually. An important innovation of the chapter is that it considers the impact of a change in the nominal exchange rate—under pegged exchange rates, the policy variable—and not just of the real exchange rate. Differentiating countries according to their main export (oil, non-oil commodities, and manufactures), Ghosh and his coauthors trace through the effects of an exchange rate movement on export and domestic prices and wages, export volumes, aggregate demand, and import volumes. Along the way, they derive the analog of the famous Marshall-Lerner condition for the case in which the country is large in its export market and the trade balance is measured in foreign currency (U.S. dollars). They find that this modified Marshall-Lerner condition holds: a depreciation of the exchange will improve the trade balance, and an appreciation will reduce a trade surplus, although the effects and dynamics are surprisingly complex.

Returning to developing countries, in Chapter 3, Alessandro Prati and Thierry Tresselt consider the impact of aid volatility on the real exchange rate and economic performance. They focus in particular on whether an aid-induced real appreciation can hurt the economy by discouraging manufacturing, and how well-designed macroeconomic policies can help offset such “Dutch disease” effects. With aid accounting for 5, 10, even 20 percent of GDP in some low-income countries, managing the effects of aid inflows—and, more pernicious, of aid volatility—is a policy challenge of vital importance. By definition, if aid is being absorbed by the recipient country, there must be a corresponding current account deficit. But volatility of aid—which translates into noisy movements of the real exchange rate—means confusing price signals for allocating resources in the economy, inefficiencies, and a loss of exports. This chapter provides much-needed guidance on the conduct of macroeconomic policies in these circumstances.

The first section of the volume is rounded out by a study by Hamid Faruquee, in Chapter 4, of exchange rate pass-through in euro area countries. Using a vector autoregression, Faruquee estimates the impact of an exchange rate shock on various prices in the economy—factor, trade, wholesale, and retail—and calculates the pass-through. This chapter thus complements Chapter 2, but deals with advanced European rather than emerging market countries. Overall, Faruquee finds relatively low pass-through coefficients, implying the need for large exchange rate movements to make much of a dent in the trade balance.

Assessing Competitiveness and the Equilibrium Real Exchange Rate in Specific Countries or Country Groups

Perhaps the most common form of exchange rate analysis undertaken at the IMF concerns external competitiveness and assessments of whether the real exchange rate is in equilibrium—or either over- or undervalued, with studies focusing on single countries or, more broadly, on groups of countries. The standard approach—used in three of the four chapters in this section—is to estimate a long-run cointegrating relationship between the real exchange rate and various determinants. The actual real exchange rate is then compared to the fitted real exchange rate calculated at “equilibrium” values for the various determinants. There is both an art and a science to this. The science lies in undertaking the econometrics properly, finding time series that may be individually nonstationary but jointly forming a cointegrating vector with the real exchange rate. The art lies in choosing economically meaningful series to include in the analysis and—more difficult—deciding what constitute “equilibrium” values for these explanatory variables.

Ronald MacDonald and Luca Ricci, in their study of South Africa in Chapter 5, model the real exchange rate as a function of interest rates, GDP, commodity prices (consistent with Cashin et al.’s finding in Chapter 1 that commodity prices play an important role in real exchange rate determination), trade openness, fiscal balance, and net foreign asset position. Next, in Chapter 6, Céline Allard and her coauthors estimate structural equations for exports and imports to explain differences in the external sector performance in euro area countries in response to movements of their common exchange rate. Then, in Chapter 7, Catriona Purfield models India’s equilibrium real exchange rate as a function of productivity differentials (relative to trading partners, to capture Balassa-Samuelson effects), trade openness, and net foreign asset position. Finally, Yasser Abdih and Charalambos Tsangarides in Chapter 8 examine real exchange rates in the WAEMU and CEMAC countries as functions of the terms of trade, government spending, productivity, and investment.

For some of the variables examined in this section, specifying equilibrium values is straightforward. For others, such as the level of government spending or the fiscal balance, either the authorities’ policy intentions—as discussed, for example, during the Article IV process—or some estimate of a sustainable balance (for example, using the IMF’s debt sustainability framework) can provide useful benchmarks. For yet other variables, such as productivity differential, it is very difficult to choose long-run equilibrium values and possibly no easier than projecting the equilibrium real

exchange rate itself. Faced with this challenge, the authors of this study adopt a variety of interesting and innovative approaches.

Considerations in Choice of Exchange Rate Regime

Each IMF member country is free to adopt the exchange rate regime of its choice. This does not mean, however, that IMF staff are not called upon to provide advice on the choice of exchange rate regime. Indeed, the freedom to choose has generated a huge demand for analysis on the appropriate choice of exchange rate regime.

To this end, Aasim Husain proposes in Chapter 9 a “template” with which countries can assess the costs and benefits of different regimes according to their economic characteristics. He applies his template to Pakistan and Kazakhstan, explaining how their different economic characteristics affect the optimal regime choice.

In Chapter 10, Enrica Detragiache and her coauthors take up a related, but slightly different, question, namely, when do countries exit from pegged regimes? A country may adopt an exchange rate peg “temporarily”—for example, pegging the exchange rate as part of an exchange-rate-based stabilization program, even though a pegged regime is not suitable for the country over the longer-term. When and how should it then exit the peg? The received wisdom—and common sense—suggests that countries should exit from a position of strength, that is, when exiting the peg is not likely to result in a disorderly depreciation of the exchange rate. Obviously, waiting for a currency crisis does not seem a great idea. Yet as Detragiache and her coauthors document, countries seldom take this advice and exit in a timely manner, and in about one-half of cases, they suffer a crisis in consequence.

Indeed, as Grace Juhn and Paolo Mauro show in the final chapter in this volume, it is difficult to pin down systematically the determinants of countries’ choice of exchange rate regime. Juhn and Mauro survey the literature on regime choice and estimate their own multinomial logit regressions, relating regime choice to variables such as optimum currency area determinants, capital account openness, inflation, foreign exchange reserves, historical and institutional variables, and country size—finding only the last to be robustly related to whether a country chooses to float or peg its exchange rate.

Juhn and Mauro’s chapter is a fitting piece on which to end this volume, because it underscores that much more work needs to be done—and will continue to be done at the IMF—to understand what drives exchange

rates, how countries should choose their exchange rate regime, and what the implications of this choice are for their own economic performance and for the stability of the international monetary system. As the volume goes to press, such a study of countries' choice of regime and the implications for the international monetary system is in fact underway at the IMF—yet another example of the centrality of exchange rate analysis to the IMF's surveillance mandate.