Exchange Rate Misalignment
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The last week has, I suppose, been a fairly typical one for me. Twice during the week I have encountered distinguished economists analyzing important current problems who asked their audience to accept the new faith that exchange rate policy has been hollowed out by capital mobility, leaving nothing coherent between a fixed exchange rate backed up by a currency board on the one hand, and floating rates on the other. One was Barry Eichengreen, discussing the design of a new international financial architecture at a meeting of the Institute for International Economics. The other was Ernie Preeg, focusing on the outlook for the U.S. economy escaping from its massive current account deficit without a hard landing, in a paper for the Hudson Institute. Interestingly, neither of these analysts ended up by advocating completely freely floating exchange rates without any intervention. Eichengreen took it for granted that floating would be “dirty”; as we all know, “dirty floating” is an emotionally biased term invented by ideological floaters in order to try and discredit exchange rate management. Preeg argued that some “disciplines among the three key currencies on central bank intervention” will be necessary.

If even those who think they have been driven to support floating exchange rates are still taking it for granted that there needs to be some degree of management by the authorities, then two things follow. The first is that there is still a market niche for those of us who try to think about how a system of limited flexibility might best be organized. The other is that there is going to be a continuing need for analysis of where an exchange rate lies in relation to what the authors of this volume call its long-run equilibrium level (the LRER). In the second footnote of the volume the authors gently chastise me for "the somewhat apologetic tone" of my introduction to *Estimating Equilibrium Exchange Rates*, a volume I edited that set itself a fairly similar task, where I seek to defend the value of this exercise. I am delighted that they feel no need for such a qualification. There is indeed a serious job of work to be done, and the
authors in this volume set about doing it with determination and a high degree of professional competence. Since it seems I am no longer as intellectually isolated as I have periodically feared since I began drawing analytical distinctions between different concepts of the equilibrium exchange rate back in 1983, and argued that it was important to try and develop empirical estimates of at least one of those concepts (the one that I termed the "fundamental equilibrium exchange rate," which is roughly equivalent to the LRER of this volume), I promise to be less apologetic in future.

Had I been asked to guess ex ante what countries the authors planned to focus most attention on, I cannot imagine that I would have regarded Côte d’Ivoire and Burkina Faso as leading candidates. In fact this choice was driven by operational exigencies in the World Bank in the early 1990s, at a time when people valuing their careers did not talk out loud about the overvaluation of the CFA franc (any more than people with ambitions spoke about the overvaluation of the pound in the British Treasury in 1966). The natural strategy of a conscientious official confronted by a gag order that he believes cannot last long is to quietly initiate a research program that will help to sort out the mess when higher authority is forced to face the facts of life. That is what happened here. We should be profoundly thankful that the Bank had employees who were prepared to take the risk of reacting that way. They have ended up by producing a book that has far wider applicability than to the CFA countries, or indeed than just to developing countries. This book will surely become the standard reference on the estimation of equilibrium exchange rates (or, what amounts to the same thing, on exchange rate misalignments).

I find it difficult to imagine a world in which it would not be important to estimate exchange rate misalignments. Imagine that Argentina really does dollarize, and then an asymmetrical shock leaves it in deep and seemingly permanent depression. Estimating the degree of overvaluation would be important not just as an input into the inevitable national debate on whether to recreate a national currency, but also to estimate how large a general wage cut would be needed to create the desirable real devaluation without using the exchange rate. Or consider the problems that confront the East Asian countries today (early 1999), of knowing whether their now-floating exchange rates have undone a sufficient part of the overshooting of late 1997 to make it sensible policy to start rebuilding reserves in a big way. Or it may even be that there will be a role for this type of analysis one day among the G3, if and when a concern to adjust the U.S. current account deficit re-emerges.

The material in this volume covers all the important approaches to the estimation of the LRER, from the crudest PPP doctrines (currently
popularized by The Economist’s “Big Mac Index”) through to the simulations of large macroeconometric models that I have attempted to use and the new approach of using unit-root econometrics to derive estimates from a single equation reduced form. I found it particularly interesting that, as an empirical proposition, relative PPP works for Burkina Faso. The volume also provides an excellent guide to the quite sophisticated literature on different concepts of the real exchange rate, and avoids facile identification of one concept as being “the right one.” It warns against all the errors that abound in this field (for example, purporting to explain why devaluation won’t work, or claiming that all one needs to do is look at the black-market rate or the Big Mac Index to know what the exchange rate should be).

Some people may believe that crises are an inevitable feature of the capitalist system. Others hold that exchange-rate crises will vanish as more and more countries adopt floating exchange rates. I can understand adherents of both those views dismissing this book as of no interest. But some of us believe that crises can be avoided or at least limited by good economic management, and that having a reasonable idea of where the equilibrium exchange rate lies is an essential requirement for good macro management. Those who share these views will want to see this volume widely used to help policy analysts get a feeling on what can and cannot be said about the equilibrium exchange rate, and so make an important contribution to the improvement of macro management and hence the avoidance of future crises.
About the Authors

Lawrence E. Hinkle is a Lead Economist in a macroeconomic unit of the Technical Department of the World Bank's Africa Region. From 1991 to 1994, he led the Bank's technical preparatory work for the devaluation of the CFA francs. From 1994 to 1997, while much of the research for this book was carried out, he was a visiting fellow in the macroeconomics division of the World Bank's Policy Research Department. His work at the Bank has been primarily in the areas of adjustment policy, exchange rates, trade, monetary, and customs unions.

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Acknowledgments

The initial research that eventually led to this book was motivated by one of the major exchange rate crises that punctuated the last decade in the developing world—the devaluation of the CFA francs in 1994. Most of the members of the study team participated in that initial research, although none of us had any idea at the time that our work would ultimately emerge in anything like its current form. Subsequently, as the relevance of our initial research on the misalignment of the CFA francs to other developing countries was highlighted by repeated exchange rate crises elsewhere, analytical techniques used in other countries, and economists experienced with these, were added to the project to complement the initial research and round out the coverage of the study.

As project managers and then editors, we were blessed with a particularly competent team of fellow researchers and co-authors. They both made strong individual contributions and were invaluable sources of comments and guidance on the other papers and the project as a whole. The other members of the study team were:

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John Baffes, Economist, Development Prospects Group, World Bank;

Shantayan Devarajan, Research Manager, Development Research Group, World Bank;

Ibrahim A. Elbadawi, Senior Economist, Development Research Group, World Bank;

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Nadeem Ul Haque, Advisor, IMF Institute, International Monetary Fund.

Steven B. Kamin, Senior Economist, Division of International Finance, Board of Governors of the Federal Reserve System, Washington, D.C.;
Fabien Nsengiyumva, Economist, IMF Institute, International Monetary Fund;

Stephen A. O'Connell, Professor of Economics, Swarthmore College, Swarthmore, Pa.;

Lant Pritchett, Principal Economist, Resident Mission Indonesia, World Bank.

A special note of thanks is also due to John Williamson. John came to the project as a reviewer when the manuscript of the book was first taking shape. His insightful and intellectually demanding comments both shaped the volume and helped motivate us to push the work farther than we had initially envisaged.

Ingrid Ivins provided cheerful, careful, and competent research assistance from the first days of the initial work on the CFA francs in 1990 through final completion of this volume in the spring of 1999. Emily Khine, Camille Darmon, and Jagdish Lal tirelessly processed and repro-cessed countless versions of the 13 papers that eventually became the manuscript of this book. The World Bank’s Africa Region, Development Research Group, and Poverty Reduction and Economic Management Network provided the financial support for the research.

Finally, we would like to dedicate this book as follows:

To my father, Lawrence E. Hinkle, M.D., for his lifelong interest in research and his support.

To my mother, Maria Montiel, for her unwavering support and affection.

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WORLD BANK

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Acronyms and Abbreviations

ADF  augmented Dickey-Fuller
ADL  autoregressive distributed lag
BN   Beveridge-Nelson
BRER bilateral real exchange rate
CFA  Communauté Financière Africaine
CGE  computable general equilibrium
CPI  consumer price index
DEER desired equilibrium exchange rate
DER  dual exchange rate
DF   Dickey-Fuller
DLR  Devarajan, Lewis, and Robinson
DRER desired equilibrium real exchange rate
EU   European Union
FDI  foreign direct investment
FEER fundamental equilibrium real exchange rate
G-7  group of seven
GDP  gross domestic product
HBS  Harrod-Balassa-Samuelson
HLM  Haque-Lahiri-Montiel model
ICP  International Comparison Programme
IFS  International Financial Statistics
IIE  Institute of International Economics
IMF  International Monetary Fund
INS  Information Notice System
LIBOR London interbank offer rate
LIDC low-income developing country
LRER long-run equilibrium real exchange rate
NATREX natural equilibrium real exchange rate
NEER nominal effective exchange rate
NTB  nontariff barrier
OECD Organization for Economic Cooperation and Development
OLS  ordinary least squares
PP   Phillips-Perron
PPP  purchasing power parity
REER real effective exchange rate
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>RER</td>
<td>real exchange rate</td>
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<tr>
<td>SDR</td>
<td>standard drawing right(s)</td>
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<tr>
<td>SRER</td>
<td>short-run equilibrium real exchange rate</td>
</tr>
<tr>
<td>SSA</td>
<td>sub-Saharan Africa</td>
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<tr>
<td>UFC</td>
<td>unit factor cost</td>
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<tr>
<td>ULC</td>
<td>unit labor cost</td>
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<tr>
<td>UNCTAD</td>
<td>United Nations Conference on Trade and Development</td>
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<tr>
<td>UNIDO</td>
<td>United Nations Industrial Development Organization</td>
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<tr>
<td>WPI</td>
<td>wholesale price index</td>
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