Foundations of International Macroeconomics

by Maurice Obstfeld and Kenneth Rogoff

Preface

The goal of this book is develop a broad coherent framework for thinking about the fundamental problems in open economy macroeconomics (alternatively referred to as international finance). We are unaware of any previous attempt to do this using modern analytical methods.

This project arose from our concern over the widespread view that open-economy macroeconomics (also known as international finance) has become an extremely scattered field, defined more by the people who consider themselves to work in it than by any set of unifying ideas. This point was brought forcefully home in an informal survey conducted by Professor Alan Deardorff of the University of Michigan. In 1990, Deardorff gathered graduate international finance reading lists from eight top economics departments, hoping to find a consensus on which readings should be deemed most essential. To his surprise, Deardorff found strikingly little agreement, with only one article appearing on more than half the reading lists. Such idiosyncrasies will come as no surprise to those who have studied international finance in graduate school. Whereas most students find the issues fascinating, a constant complaint is that the material lacks a unified theme, and that radical gear shift are needed to move from one topic to the next.

Some senior economists at leading departments view the state of the field with such dismay that they teach mostly out of articles written in the 1960s and 1970s (or at least articles that should have been written then), disdaining the modern literature for its alleged lack of relevance. Unfortunately, that approach is not productive for graduate students who need a vision of the field's present and its future. While the classic literature from twenty and thirty years ago can be admired for articulating and attempting to formalize a number of central policy issues, its limitations are many. The classic approach lacks the microfoundations needed for internal consistency, it fails to deal with dynamics in any coherent way, and its vision of capital market integration may generously be described as narrow. Perhaps most importantly, the older literature simply doesn't deal sensibly with many questions that are central to the policy world of today such as current accounts, government budget deficits, speculative attacks, and the implications of the expanding markets for global securities and derivatives.

Our goal in this book is to show that one can address virtually all the core issues in international finance within a systematic modern approach that pays attention to the nuances of microfoundations without squeezing all life out of this fascinating topic. We knew at the outset that our project was an ambitious one, and plunged ahead despite having no idea how we would cross some of the vast chasms in the field. We realized that many areas would have to be substantially reformulated, and frankly hoped that some of the gaps would be fortuitously filled in by other researchers over the life of the project. This did happen, but only in small doses. One important missing link we tackled involved bridging the gap between modern flexible-price maximizing models of the current account, and the older sticky-price Keynesian models that still dominate the policy debate. The approach we took is the subject of chapter 10. The reader will have to judge for himself or herself how successful we have been in our goal of offering a unified framework. Whereas we do not pretend that any one model encompasses all issues, you should find that most models and themes we develop appear several times in the book, sometimes in seemingly widely disparate contexts.

The authors of any manuscript this length must stand ready to be accused of self-indulgence. We trust the reader will find that a part of the length can be explained by our deliberate attempt to make the chapters easy to follow. We fill in many intermediate steps to guide our readers through the central models, hoping to save them the frustrations we ourselves often feel when trying to follow the mathematics of elegant but tersely expressed articles. We also devote a considerable amount of attention to providing empirical support for the main concepts and themes we introduce. Our notion of empirical evidence is broad one. If there exists a careful econometric study that casts light on a question we ask, we try to discuss it. But if the best evidence is a suggestive diagram or a relatively unsophisticated regression, we still offer it to illustrate our concepts if not to test them.

How did we ultimately decide on the specific topics to be covered? Two criteria strongly influenced our choices. We biased our selection toward topics that we felt we could integrate with our central microfoundations approach, and toward topics for which there seemed to exist an interesting empirical literature we could discuss. With little exception, nothing appears in the book that is not based on explicit microfoundations. But we have not been so dogmatic as to exclude the most influential ad-hoc aggregative models completely. You will find Solow's growth model in Chapter 7, Cagan's model of hyperinflation in Chapter 8, and Dornbusch's classic extension of the Mundell-Fleming open-economy *IS-LM* model in Chapter 9. In each case, however, we go on to show how similar ideas could be expressed in models with microfoundations. Though we try to be up to date, we have also tried not to be slaves to fashion. Target zone exchange rate models are great fun and have generated a tidal wave of papers; we provide an introduction in chapter 8. But we think the small number of pages we devote to the issue is the right proportion for this book, and we make no apologies for not including an entire chapter on the subject. Other topics such as European Monetary Union (on which both of us have written) are of great current interest, but the relevant academic literature consists largely of narratives or applications of seasoned theory.. We examine optimal currency areas in chapter 9, but not nearly as extensively as others might have chosen to do. We genuinely regret not having more space left over to deal with political economy issues. We do cover these to some extent in our discussion of international debt and exchange rate policy. But again much of the literature uses rather stylized descriptive models that did not easily fit into our general approach, and so we leave that important subject for later work. In addition to the core material in Chapters 1 through 10, we have also included a number of Supplements (five in all) covering the mathematical methods applied in the main exposition, ranging from difference equations to dynamic programming. We were especially concerned o provide useful primers for material that is "folk-wisdom"' in the field but for which one often cannot find an easily accessible reference.

Some inwardly-oriented macroeconomists may look at our coverage and feel that we have somehow usurped standard topics from macro such as growth or inflation. Our simple answer to them is that we do not consider "closed-economy" macroeconomics to be an independent field. We do not see how anyone can. The United States now trades extensively, and even Albania has opened up to the outside world. There are no closed economies, there are no virtually closed economies. There are only open national economies and the global economy. Macroeconomics is not only field our analysis crosses; we freely draw on finance and trade theory throughout. However, we do not necessarily expect our reader to be conversant with all these topics, and we generally develop all necessary concepts from the ground up.

Finally, the question may arise as to how we intend that this book be used. Is it a treatise? Is it for the core of a graduate international finance course? Or is it aimed at first-year graduate macroeconomics? The answer, we admit, is all three. The book contains a great deal of new research, most notably in Chapter 4, where we given a dynamic version of the classic Dornbusch-Fischer-Samuelson continuum model, and in Chapter 10, where we develop a sticky-price dynamic model that finally updates the Mundell-Fleming-Dornbusch model. We also develop a number of useful diagrams and analytical devices, including microfoundations for the classic Metzler diagram in Chapter 1, and a "GDP-GNP" diagram for analyzing nontradable goods production under capital mobility in Chapter 4. In Chapter 5, we demonstrate the remarkable analogy between modern finance models incorporating nonexpected utility preferences and standard open-economy intertemporal models that allow for multiple consumption goods. Chapter 6 on international debt contains a number of new results, for example, on the relationship between investment and foreign debt levels. In Chapter 8, we show how to develop a simple tractable general equilibrium model for nominal asset pricing that is more plausible empirically plausible than the alternatives in the existing literature.

Second-year graduate international finance students are certainly an important constituency. We appreciate that this book cannot easily be covered in a semester, but one can easily choose parts of it as the basis for a course, and use readings to cover other recent research developments. Second-year students may be able to skim fairly quickly past some parts of Chapters 1-3, provided this material was adequately covered in their first-year macroeconomics course. As for a first-year macro course, our coverage is fairly comprehensive, although naturally the choice of topics is biased toward open-economy issues. We have endeavored to make most of the chapters relatively self-contained and, except for perhaps for Chapters 4 and 10, most of the material in the other chapters should be accessible to a first-year student. Sections making the most technical demands are marked with an asterisk (*), and the book is written so that they may be skipped without breaking the flow of the development. We hope that both first- and second-year students will appreciate our efforts at working through the models very algorithmically, providing many intermediate steps along the way.

Apologies: Although our book includes extensive citations, space limitations simply make it impossible to provide the intellectual history behind every idea. There are numerous excellent surveys (many of which we reference) that are more suitable for this purpose. We also regret (and accept full responsibility for) the hopefully small number of erroneous attributions, equation typos, and other mistakes that may have crept into the manuscript.

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