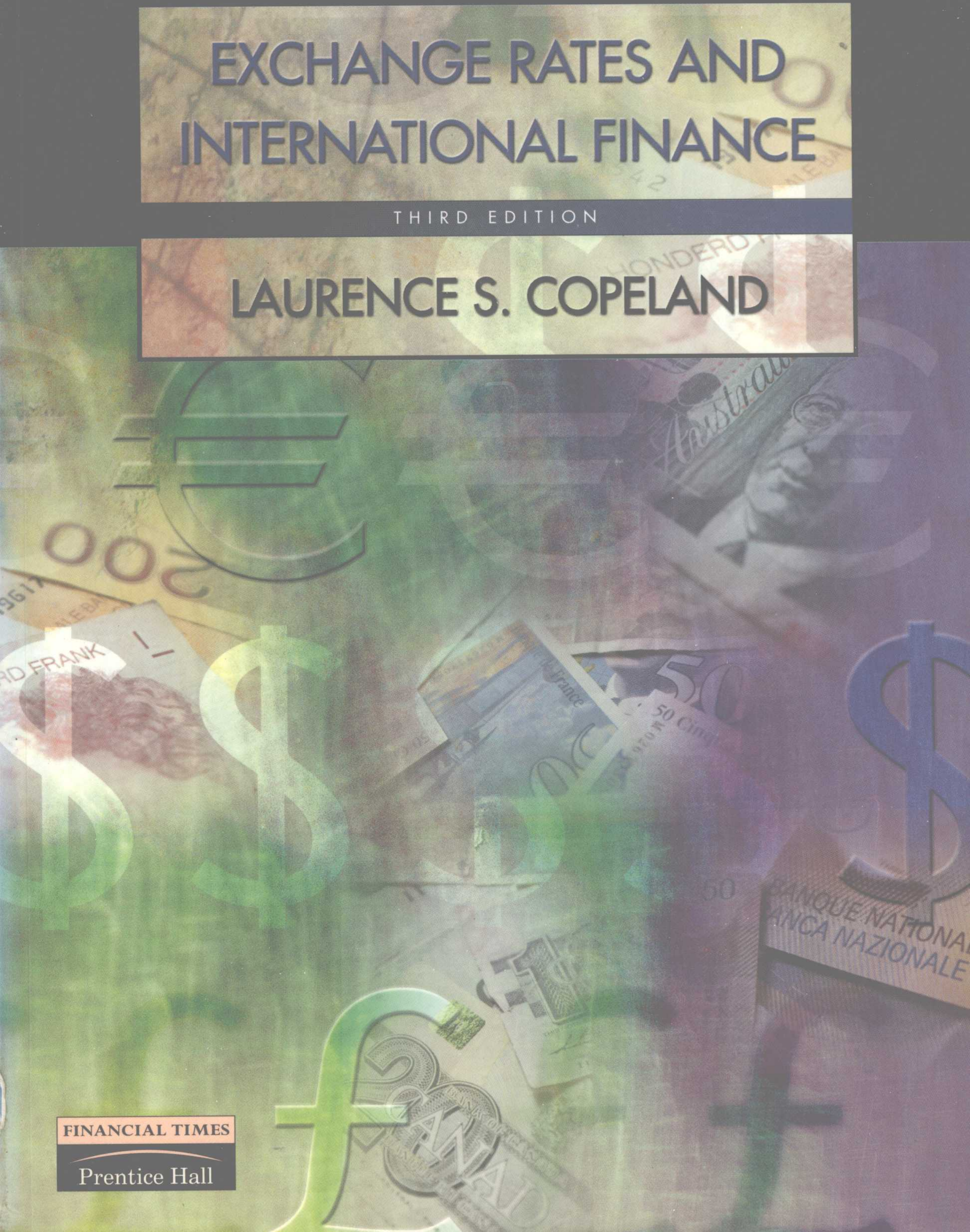
EXCHANGE RATES AND INTERNATIONAL FINANCE

THIRD EDITION

LAURENCE S. COPELAND



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To the memory of Robert Copeland

Preface to the first edition

'An economist is someone who, instead of telling us why the world is the way it is, tells us why it isn't the way his theories suggest it should be.'

Exchange rates play an increasingly important part in economic life. This is true of the public at large, of corporate management, of city financiers – and, of course, of treasury chiefs. Exchange rate fluctuations are nowadays part of the background of all our lives. The purpose of this book is to provide a guide to what the economics profession has to say about the causes and consequences of these fluctuations.

More than that, it is perhaps worth stating at the outset what this book is *not*. It is not a reference survey of the literature on international finance or, for that matter, on open economy macroeconomics. Nor is it a guide to the ins and outs of currency trading or to the esoteric detail of foreign exchange markets. Nor is it meant to be 'Teach Yourself International Macroeconomic Management' or the 'Practical Central Banker and Finance Minister'. Furthermore, the coverage of the institutional background is the absolute minimum for the exposition.

What the book *does* try to achieve is both more and less ambitious. The objective is to provide an explanation of what the economics profession has to say on a number of topics, chosen for their contemporary relevance rather than their importance in the history of economic thought. For that reason I have not covered the elasticity and absorption approaches, for example, decisions which may well appear perverse to some academic colleagues.

The orientation of the book is by and large away from the policy issues and towards the positive aspects of exchange rate determination, with a particular emphasis on the contributions of modern finance theory to our understanding of the subject (for example, efficient markets, risk premiums and so on).

Readership

The technical level has been kept as undemanding as possible. As far as the topics covered in the early chapters are concerned (purchasing power parity, interest rate parity, the monetary model) that poses no problem, so the material should be accessible to readers with little or no knowledge of mathematics and virtually no background in economics: first-year undergraduates, MBA students or interested market professionals. The later chapters are inevitably somewhat more demanding in terms of technical sophistication and will certainly be appreciated better by readers with a minimal proficiency in elementary calculus and, for the final chapter, some acquaintance with the basic concepts of statistics (variance and covariance and so on). These later chapters may well be of use to fellow academics from different specialisms looking for a quick overview of the state of exchange rate economics, as well as final year students.

Structure and content

The more advanced sections have been signalled by an asterisk, ★. In a few cases the starred sections are preceded by simplified versions of the analysis, so that an alternative to the 'high road' is provided.

Throughout the exposition the emphasis is on delivering the *intuition* behind the results. Rigour is available in abundance in the original literature, references to which are provided at the end of each chapter. The same reasoning led to the decision to cover the empirical work briefly, with little attempt to explain research methodologies in any detail. To do so would in any case have presupposed an understanding of econometrics.

Instead, the aim in the sections on empirical results is to give a concise summary of what we know (or think we know) on the subject involved and some indication of which questions remain open. If the author's experience is typical, students and laymen often have difficulty in grasping *why* it is that the economics profession finds it so hard to answer questions like: does interest rate parity hold? is there a risk premium? are expectations rational? Wherever possible I try to explain the main problems facing researchers, while at the same time trying not to forget that the overwhelming majority of readers have no desire to lay the foundations of a career in academic research.

The book will have achieved its objective if, after reading any chapter, the student is able to understand the *economic argument* in an article on the same subject in one of the professional journals.

Acknowledgements

A number of people have helped in the production of this book. Colleagues Fred Burton and Martyn Duffy read chapters and offered helpful comments and gave much-needed support. Ronnie Macdonald waded through a draft of Chapters 10 and 11. Michael Artis not only read Chapter 11 but provided the vital encouragement at the outset, without which the book would never have been written. I am grateful to Addison-Wesley, particularly Sarah Mallen who had faith in the project and Allison King who has also showed the unfailing confidence in its prospects without which my determination to finish would certainly have flagged long ago.

Since the shortcomings that remain are the product of my own stubbornness, they must be my own responsibility.

Laurence S. Copeland
July 1989

A note on language: For reasons of simplicity the pronoun 'he' is used to relate to both male and female throughout the book.

Preface to the second edition

A number of changes have been made in this edition:

(1) Tables and graphs have been updated to cover the early 1990s instead of the late 1980s. Likewise, the potted history of the international monetary system in Chapter 1 has been updated to cover the collapse of the ERM.

(2) An explanation of the difference between bid and asked rates has been added to Chapter 1.

(3) An extra section (3.3) has been added to Chapter 3 to cover money market arbitrage, thereby generalizing the analysis of forward markets to cover borrowing and lending.

(4) A new chapter (10) has been added at the end of Part II. It covers the economics of currency unions, focusing mainly on the example of the proposed European union, but with sideways glances at a number of other instructive cases, not least the instances of monetary disintegration in what was the Soviet Empire.

(5) The other new chapter (14) explains the potential implications of non-linearity and complexity for exchange rates. In order to do so, it dwells at some length on the basic mathematics of chaos, using the standard phase portrait analysis of the logistic function à la Baumol and Benhabib. As such, the chapter may well provide a useful point of departure for the study of other markets where chaotic processes are suspected.

I am grateful to a number of people for comments on this edition. Before embarking on this edition, I received helpful comments and corrections from a number of readers on the first edition. I am extremely fortunate in having Sheila Dow as a colleague at Stirling. Her comments on an early draft of Chapter 10 (on currency unions) were invaluable. The publishers' own referees were thorough and painstaking in their comments on both the new chapters. Any remaining errors are probably due to my own stubbornness in not taking on board all their suggestions.

Laurence S. Copeland
June 1994

Preface to the third edition

This new edition sees some notable changes both in content and format. Taking content first:

(1) Two new chapters, 15 and 16, have been added to cover recent developments in the literature on exchange rate target zones and on currency market crises respectively.
(2) Existing chapters have been augmented to cover topics which have come to the fore since the last edition, notably currency boards (Chapter 10), the possible implications of e*trade for purchasing power parity, and the Asian Crisis (Chapter 1, though the topic is also discussed at some length in the new Chapter 16).
(3) The exposition has been clarified at a number of points and efforts have been made to structure the arguments more clearly.
(4) The sections presenting evidence have been extensively updated.

As far as the style is concerned, this edition is intended to be a lot more user-friendly, both for student readers and instructors. Notable innovations include:

(1) The introduction of essay and discussion questions at various points in the text.
(2) The addition of margin notes to make navigation around the book easier and to allow readers to make quick overviews of the material, for example when revising or preparing summaries.

Most important of all, readers are encouraged to work through the text in conjunction with the book's new Web page at www.booksites.net/copeland. He or she will find there:

(1) supplementary datasets (in some cases, the same data used to generate graphs in the book);
(2) additional relevant readings;
(3) links to other useful Web pages, e.g. those of major Central Banks, academics who have made major contributions in the area, important data sources, etc.

The page will be updated at regular intervals so as to provide a channel for ongoing contact with readers, allowing us to introduce changes and additions to the text when necessary in order to accommodate new developments as they occur.

Readers may also contact the author with comments, suggestions etc., on copeland@cf.ac.uk.

Who knows? The next edition of this book may be a purely Web edition, and by 2050, in the age of the virtual textbook, this may be a collector's item – the last paper-based edition. All the more reason then to record on paper, while it is still in use, my gratitude to:

- colleagues at Cardiff, notably Sugata Ghosh and Laurian Lungu for their comments on the two new chapters;
- Sally-Anne Jones, for providing superlative research assistance;
- Paula Harris who, in addition to the normal duties of an editor, had to be a point of contact for me while her corporate employer merged and remerged.

Any remaining errors and omissions are my own responsibility (and if necessary may be corrected on the book's Web page).

Laurence S. Copeland
November 1999

Publishers' acknowledgements

The publishers wish to thank the following:

- The *Financial Times* for permission to reproduce Table 1.1 from the issue dated 7 July 1988, Table 1.2 from the issue dated 19 February 1993 and for permission to use data from issues published between 1976 and 1986 to produce Figures 11.1 and 11.2.
- The Controller of HMSO for permission to reproduce material from *Financial Statistics, Economic Trends* (June 1992) in Table 1.3.
- Datastream International for permission to use data from various sources between 1972 and 1993 for Figures 1.3–1.5, 2.1–2.4 and 8.5–8.10, and Table 1.3.

Contents

1 Introduction

INTRODUCTION

Until a few years ago, it might have been necessary to start a book like this by asking the question: why study exchange rates? and then giving an answer in terms of academic curiosity, the design of macroeconomic policy, international trade and so on.

Nowadays, surely, there is no need to justify devoting a book to the subject. Exchange rates are no longer an arcane interest confined to a handful of economic specialists and traders. They are simply ubiquitous, to the point where it almost seems that whatever the subject under discussion – the outlook for the domestic or world economy, stock markets, industrial competitiveness at the level of the firm or the industry, even the outcome of the next election – the answer almost invariably turns out to revolve around the exchange rate. The days when exchange rates could safely be ignored by the vast majority of decision makers are long passed, and there is at the moment little prospect of them ever returning.

To some extent, the increased importance being attached to exchange rates is a result of the internationalization of modern business, the continuing growth in world trade relative to national economies, the trend towards economic integration (in Europe, at least), and the rapid pace of change in the technology of money transfer. It is also in large part a consequence of the fact that exchange rates are not