

# Contents

PREFACE . . . . .	VII
<b>1 Introduction</b>	<b>1</b>
1.1 Old and New Approaches to International Finance . . . . .	1
1.2 Structure of the Book . . . . .	2
1.3 Small and Large Open Economies . . . . .	4
1.4 References . . . . .	4
<b>I The Basics</b>	<b>5</b>
<b>2 The Foreign Exchange Market</b>	<b>7</b>
2.1 Introduction . . . . .	7
2.2 The Spot Exchange Market . . . . .	9
2.3 The Real Exchange Rate . . . . .	12
2.4 The Effective Exchange Rate . . . . .	15
2.5 The Forward Exchange Market . . . . .	16
2.5.1 Introduction . . . . .	16
2.5.2 Various Covering Alternatives; Forward Premium and Discount . . . . .	17
2.6 The Transactors in the Foreign Exchange Market . . . . .	21
2.6.1 Speculators . . . . .	22
2.6.2 Non-Speculators . . . . .	23
2.6.3 Monetary Authorities . . . . .	23
2.7 Currency Derivatives . . . . .	23
2.7.1 Futures . . . . .	24
2.7.2 Options . . . . .	25
2.7.3 Swap Transactions . . . . .	26
2.8 Eurodollars and Xeno-Currencies . . . . .	28
2.9 References . . . . .	30
<b>3 Exchange-Rate Regimes</b>	<b>31</b>
3.1 The Two Extremes . . . . .	31
3.2 The Bretton Woods System . . . . .	33
3.2.1 The Monetary Authorities' Intervention . . . . .	33

3.3	Other Limited-Flexibility Systems . . . . .	35
3.4	The Current Nonsystem . . . . .	37
3.5	International Organisations . . . . .	38
3.5.1	The IMF . . . . .	39
3.5.2	The World Bank . . . . .	40
3.6	References . . . . .	41
<b>4</b>	<b>International Interest-Rate Parity Conditions</b>	<b>43</b>
4.1	Covered Interest Arbitrage, and Covered Interest Parity (CIP) . . . . .	43
4.2	Uncovered Interest Parity (UIP) . . . . .	46
4.3	Uncovered Interest Parity with Risk Premium . . . . .	47
4.4	Real Interest Parity . . . . .	47
4.5	Efficiency of the Foreign Exchange Market . . . . .	48
4.6	Perfect Capital Mobility, Perfect Asset Substitutability, and Interest Parity Conditions . . . . .	49
4.7	References . . . . .	51
<b>5</b>	<b>The Balance of Payments</b>	<b>53</b>
5.1	Balance-of-Payments Accounting and Presentation . . . . .	53
5.1.1	Introduction . . . . .	53
5.1.2	Accounting Principles . . . . .	55
5.1.3	Standard Components . . . . .	58
5.1.3.1	Current Account . . . . .	59
5.1.3.2	Capital Account . . . . .	61
5.2	The Meaning of Surplus, Deficit, and Equilibrium in the Balance of Payments . . . . .	64
5.3	References . . . . .	67
<b>6</b>	<b>Real and Financial Flows in an Open Economy</b>	<b>69</b>
6.1	Introduction . . . . .	69
6.2	The Row Identities . . . . .	72
6.3	The Column Identities . . . . .	73
6.4	Derived Identities . . . . .	75
6.5	Identities Are Only Identities . . . . .	77
<b>II</b>	<b>Flow Approaches</b>	<b>79</b>
<b>7</b>	<b>The Elasticity Approach</b>	<b>81</b>
7.1	Introduction . . . . .	81
7.2	Critical Elasticities and the So-Called Marshall-Lerner Condition . . . . .	82
7.2.1	The Balance of Payments in Domestic Currency . . . . .	83
7.2.2	The Balance of Payments in Foreign Currency . . . . .	85

7.2.3	Elasticity Optimism vs Pessimism . . . . .	86
7.3	Foreign Exchange Market Equilibrium and Stability . . . . .	86
7.3.1	Derivation of the Demand and Supply Schedules; Multiple Equilibria and Stability . . . . .	88
7.4	Interrelations between the Spot and Forward Exchange Rate . . . . .	91
7.4.1	The Various Excess Demand Schedules . . . . .	91
7.4.2	Forward Market Equilibrium and the Spot Rate . . . . .	95
7.4.3	The Monetary Authorities' Intervention . . . . .	96
7.5	References . . . . .	97
<b>8</b>	<b>The Multiplier Approach</b>	<b>99</b>
8.1	The Basic Model . . . . .	100
8.2	Balance-of-Payments Adjustment in the Case of an Exogenous Increase in Exports . . . . .	103
8.3	Balance-of-Payments Adjustment in the Case of an Exogenous Increase in Imports . . . . .	106
8.4	Intermediate Goods and the Multiplier . . . . .	107
8.5	The Empirical Relevance of the Multiplier . . . . .	109
8.6	The Transfer Problem . . . . .	110
8.6.1	The Classical Theory . . . . .	112
8.6.2	The Multiplier Theory . . . . .	113
8.6.3	Observations and Qualifications . . . . .	114
8.7	References . . . . .	115
<b>9</b>	<b>An Integrated Approach</b>	<b>117</b>
9.1	Interaction between Exchange Rate and Income in the Adjustment Process . . . . .	117
9.1.1	A Graphic Representation . . . . .	119
9.1.2	Stability . . . . .	122
9.1.3	Comparative Statics and the Transfer Problem . . . . .	124
9.2	The J-Curve . . . . .	126
9.3	The S-Curve . . . . .	128
9.4	The Alleged Insulating Power of Flexible Exchange Rates, and the International Propagation of Disturbances . . . . .	129
9.5	References . . . . .	131
<b>10</b>	<b>The Mundell-Fleming Model</b>	<b>133</b>
10.1	Introductory Remarks . . . . .	133
10.2	Fixed Exchange Rates . . . . .	134
10.2.1	Graphic Representation of the Equilibrium Conditions	135
10.2.2	Simultaneous Real, Monetary and External Equilibrium. Stability . . . . .	140
10.2.2.1	Observations and Qualifications . . . . .	144
10.2.3	Comparative Statics . . . . .	147

10.2.3.1 The Transfer Problem . . . . .	147
10.2.3.2 Exchange-Rate Devaluation . . . . .	149
10.3 Flexible Exchange Rates . . . . .	151
10.4 References . . . . .	154
<b>11 Policy Implications of the Mundell-Fleming Model, and the Assignment Problem</b>	<b>155</b>
11.1 Introduction . . . . .	155
11.2 Internal and External Balance, and the Assignment Problem . . . . .	157
11.2.1 The Assignment Problem . . . . .	158
11.2.2 Observations and Qualifications . . . . .	161
11.3 Flexible Exchange Rates . . . . .	163
11.4 Perfect Capital Mobility . . . . .	166
11.5 References . . . . .	168
<b>III Stock and Stock-Flow Approaches</b>	<b>169</b>
<b>12 The Monetary Approach to the Balance of Payments and Related Approaches</b>	<b>171</b>
12.1 Introduction . . . . .	171
12.2 The Classical (Humean) Price-Specie-Flow Mechanism . . . . .	171
12.3 The Monetary Approach to the Balance of Payments . . . . .	174
12.3.1 The Basic Propositions and Implications . . . . .	174
12.3.2 A Simple Model . . . . .	177
12.3.3 Does a Devaluation Help? . . . . .	179
12.3.4 Concluding Remarks . . . . .	180
12.4 The New Cambridge School of Economic Policy . . . . .	180
12.5 References . . . . .	184
<b>13 Portfolio and Macroeconomic Equilibrium in an Open Economy</b>	<b>185</b>
13.1 Introduction . . . . .	185
13.2 Asset Stock Adjustment in a Partial Equilibrium Framework . . . . .	186
13.3 Portfolio and Macroeconomic Equilibrium under Fixed Exchange Rates . . . . .	191
13.3.1 Introductory Remarks . . . . .	191
13.3.2 A Simple Model . . . . .	191
13.3.3 Momentary and Long-Run Equilibrium . . . . .	195
13.4 Portfolio and Macroeconomic Equilibrium under Flexible Exchange Rates . . . . .	197
13.4.1 Introductory Remarks . . . . .	197
13.4.2 The Basic Model . . . . .	199
13.4.3 Static Expectations . . . . .	203

13.4.4 Rational Expectations and Overshooting . . . . .	206
13.5 References . . . . .	209
<b>14 Growth in an Open Economy</b>	<b>211</b>
14.1 Export-Led Growth . . . . .	212
14.1.1 The Lamfalussy Model . . . . .	212
14.1.2 The Beckerman Model . . . . .	213
14.2 Growth and the Balance of Payments . . . . .	215
14.3 Growth-Oriented Adjustment Programs . . . . .	217
14.4 References . . . . .	219
<b>IV The Exchange Rate</b>	<b>221</b>
<b>15 Exchange-Rate Determination</b>	<b>223</b>
15.1 The Purchasing-Power-Parity Theory . . . . .	223
15.1.1 The Harrod-Balassa-Samuelson Model . . . . .	225
15.2 The Traditional Flow Approach . . . . .	226
15.3 The Modern Approach: Money and Assets in Exchange-Rate Determination . . . . .	226
15.3.1 The Monetary Approach . . . . .	227
15.3.2 Sticky Prices, Rational Expectations, and Overshooting of the Exchange-Rate . . . . .	229
15.3.3 The Portfolio Approach . . . . .	233
15.3.3.1 Interaction Between Current and Capital Accounts . . . . .	234
15.4 The Exchange Rate in Macroeconometric Models . . . . .	237
15.5 Exchange-Rate Determination: Empirical Studies . . . . .	240
15.5.1 Introduction . . . . .	240
15.5.2 The Reactions to Meese and Rogoff, and the Way Out . . . . .	241
15.5.3 An Economy-Wide Model Beats the Random Walk . . . . .	243
15.5.4 The Exchange Rate in Experimental Economics . . . . .	244
15.6 Equilibrium Exchange Rates: BEERs, DEERs, FEERs and All That . . . . .	244
15.7 References . . . . .	246
<b>16 Capital Movements, Speculation, and Currency Crises</b>	<b>249</b>
16.1 Long-Term Capital Movements . . . . .	249
16.2 Short-Term Capital Movements and Foreign Exchange Speculation . . . . .	252
16.2.1 Flexible Exchange Rates and Speculation . . . . .	254
16.3 Speculative Attacks, Currency Crises, and Contagion . . . . .	256
16.3.1 A First Generation Model . . . . .	258
16.3.2 A Second Generation Model . . . . .	260

16.3.3 Third Generation Models . . . . .	264
16.3.3.1 A Third Generation Model . . . . .	265
16.3.3.1.1 The Crisis . . . . .	267
16.3.3.1.2 The Stabilization Dilemma . . . . .	269
16.3.4 The Indicators Approach. Can Crises Be Forecast? . . . . .	270
16.3.5 Contagion . . . . .	271
16.4 References . . . . .	274
<b>17 Fixed Vs Flexible Exchange Rates</b>	<b>277</b>
17.1 The Traditional Arguments . . . . .	277
17.2 The Modern View . . . . .	280
17.2.1 Money Demand Shock . . . . .	280
17.2.2 Aggregate Demand Shock . . . . .	281
17.2.3 Aggregate Supply Shock . . . . .	281
17.2.4 Conclusion . . . . .	282
17.3 The Experience of the Managed Float . . . . .	283
17.3.1 Introduction . . . . .	283
17.3.2 New Light on an Old Debate? . . . . .	284
17.4 The Vicious Circle Depreciation-Inflation . . . . .	287
17.4.1 Introductory Remarks . . . . .	287
17.4.2 The Depreciation-Inflation Circle . . . . .	288
17.4.3 Is the Circle Really Vicious? . . . . .	290
17.5 References . . . . .	291
<b>V The Intertemporal Approach</b>	<b>293</b>
<b>18 The Intertemporal Approach to the Balance of Payments, and the Real Exchange Rate</b>	<b>295</b>
18.1 Introduction: The Absorption Approach . . . . .	295
18.2 Intertemporal Decisions, the Current Account, and Capital Flows . . . . .	298
18.2.1 The Feldstein-Horioka Puzzle . . . . .	302
18.2.2 The Harberger-Laursen-Metzler Effect Again . . . . .	303
18.3 Intertemporal Approaches to the Real Exchange Rate . . . . .	303
18.3.1 Introduction . . . . .	303
18.3.2 The RAIOM Approach . . . . .	304
18.3.3 The NATREX Approach: An Overview . . . . .	306
18.3.4 A More Technical Presentation . . . . .	308
18.3.4.1 Solution of the Model . . . . .	311
18.3.4.1.1 The Medium Run . . . . .	312
18.3.4.1.2 The Long Run . . . . .	313
18.4 References . . . . .	314

<b>19 Recent Advances</b>	<b>317</b>
19.1 Introduction . . . . .	317
19.2 An Intertemporal Model with Endogenous Growth in an Open Economy . . . . .	317
19.2.1 The Net Borrower Economy . . . . .	320
19.3 Nominal Rigidities . . . . .	322
19.3.1 Extensions . . . . .	326
19.4 References . . . . .	327
<b>VI International Monetary Integration</b>	<b>329</b>
<b>20 International Monetary Integration: Optimum Currency Areas and Monetary Unions</b>	<b>331</b>
20.1 Introduction . . . . .	331
20.2 The Theory of Optimum Currency Areas . . . . .	332
20.2.1 The Traditional Approach . . . . .	333
20.2.2 The Cost-Benefit Approach . . . . .	335
20.2.3 The New Theory . . . . .	339
20.2.4 Optimum for Whom? . . . . .	340
20.3 The Common Monetary Unit and the Basket Currency . . . . .	340
20.4 The Common Monetary Policy Prerequisite, the Inconsistent Triad, and Fiscal Policy . . . . .	342
20.4.1 Fiscal Policy Coordination . . . . .	344
20.5 The Single-Currency Problem . . . . .	346
20.6 References . . . . .	349
<b>21 The European Monetary Union</b>	<b>351</b>
21.1 The European Monetary System . . . . .	351
21.1.1 The EMS and the Theory of Optimum Currency Areas	353
21.2 The Maastricht Treaty and the Gradual Approach to EMU . . . . .	355
21.3 The Institutional Aspects . . . . .	358
21.4 The Maastricht Criteria . . . . .	360
21.5 The New Theory of Optimum Currency Areas and EMU . . . . .	363
21.6 The Euro and the Dollar . . . . .	365
21.7 References . . . . .	367
<b>VII Problems of the International Monetary (Non)System</b>	<b>371</b>
<b>22 Key Events in the Postwar International Monetary System</b>	<b>373</b>
22.1 Introductory Remarks . . . . .	373
22.2 Convertibility . . . . .	375

22.3 Eurodollars . . . . .	376
22.4 Special Drawing Rights . . . . .	377
22.5 Collapse of Bretton Woods . . . . .	379
22.6 Petrodollars . . . . .	382
22.7 Demonetization of Gold . . . . .	383
22.8 EMS and EMU . . . . .	385
22.9 The International Debt Crisis . . . . .	385
22.10 The Asian Crisis . . . . .	386
22.11 References . . . . .	387
<b>23 International Liquidity, the Demand for International Reserves, and Xeno-Markets</b>	<b>389</b>
23.1 Introductory Remarks . . . . .	389
23.2 The Descriptive Approach . . . . .	390
23.3 The Optimizing Approach . . . . .	392
23.4 Is International Liquidity Still A Problem? . . . . .	394
23.5 The Composition of International Reserves . . . . .	395
23.6 The Analysis of Euro-Markets . . . . .	397
23.6.1 The Fixed-Multiplier Approach . . . . .	397
23.6.2 The Portfolio Approach to Euro-Markets . . . . .	398
23.7 An Evaluation of the Costs and Benefits of Xeno-Markets . . . . .	400
23.8 References . . . . .	402
<b>24 Current Problems</b>	<b>405</b>
24.1 Introduction . . . . .	405
24.2 International Policy Coordination . . . . .	405
24.2.1 Policy Optimization, Game Theory, and International Coordination . . . . .	405
24.2.2 The Problem of the Reference Model and the Obstacles to Coordination . . . . .	410
24.3 The Debt Problem . . . . .	413
24.4 The Asian Crisis . . . . .	413
24.5 Proposals for the International Management of Exchange Rates	414
24.5.1 Introduction . . . . .	414
24.5.2 McKinnon's Global Monetary Objective . . . . .	414
24.5.3 John Williamson's Target Zones . . . . .	415
24.5.4 The Tobin Tax . . . . .	416
24.6 References . . . . .	418
<b>VIII Appendices</b>	<b>421</b>
<b>A Appendix to Chapter 2</b>	<b>423</b>
A.1 N-Point Arbitrage . . . . .	423

A.2 References . . . . .	424
<b>B Appendix to Chapter 4</b>	<b>425</b>
B.1 Rational Expectations and Efficiency of the Foreign Exchange Market . . . . .	425
B.2 The Peso Problem . . . . .	426
B.3 The Siegel Paradox . . . . .	427
B.4 References . . . . .	427
<b>C Appendix to Chapter 7</b>	<b>429</b>
C.1 The Critical Elasticities Condition . . . . .	429
C.1.1 The Simple Case . . . . .	429
C.1.2 The General Case . . . . .	431
C.1.3 Effects on the Terms of Trade . . . . .	435
C.2 The Stability of the Foreign Exchange Market . . . . .	436
C.3 A Model for the Simultaneous Determination of the Spot and Forward Exchange Rate . . . . .	437
C.4 References . . . . .	439
<b>D Appendix to Chapter 8</b>	<b>441</b>
D.1 The Multiplier without Foreign Repercussions . . . . .	441
D.1.1 Basic Results . . . . .	441
D.1.2 The Balance of Payments . . . . .	443
D.2 Foreign Repercussions in a $n$ -Country Model . . . . .	444
D.2.1 The General Model . . . . .	444
D.2.2 Stability Analysis . . . . .	445
D.2.3 Comparative Statics. A Comparison between the Various Multipliers . . . . .	447
D.2.4 The Balance of Payments . . . . .	449
D.3 Intermediate Goods and the Multiplier . . . . .	450
D.3.1 Different Requirements of Intermediate Goods . . . . .	450
D.3.2 Identical Requirements of Intermediate Goods . . . . .	451
D.4 The Transfer Problem . . . . .	452
D.5 References . . . . .	454
<b>E Appendix to Chapter 9</b>	<b>455</b>
E.1 A Simplified Version of the Laursen and Metzler Model . . . . .	455
E.1.1 The <i>BB</i> and <i>RR</i> Schedules . . . . .	455
E.1.2 The Dynamics of the System . . . . .	456
E.1.3 Comparative Statics: The Transfer Problem . . . . .	457
E.2 The J-curve . . . . .	459
E.3 The Original Two-Country Version of the Laursen and Metzler Model . . . . .	461
E.3.1 The Basic Model . . . . .	461

E.3.2 Stability . . . . .	463
E.3.3 Comparative Statics . . . . .	464
E.3.3.1 The International Propagation of Disturbances	464
E.3.3.2 The Transfer Problem . . . . .	467
E.4 References . . . . .	468
<b>F Appendix to Chapter 10</b>	<b>469</b>
F.1 The Mundell Fleming Model under Fixed Exchange Rates . . . . .	469
F.1.1 The Slopes of the Various Schedules . . . . .	469
F.1.2 The Study of Dynamic Stability . . . . .	470
F.1.3 Comparative Statics . . . . .	472
F.1.3.1 The Transfer Problem . . . . .	472
F.1.3.2 An Exchange-Rate Devaluation . . . . .	473
F.2 The Mundell-Fleming Model under Flexible Exchange Rates . . . . .	474
F.3 References . . . . .	476
<b>G Appendix to Chapter 11</b>	<b>477</b>
G.1 Monetary and Fiscal Policy Under Fixed Exchange Rates . . . . .	477
G.1.1 The Static Model . . . . .	477
G.1.2 The Assignment Problem . . . . .	478
G.1.3 A Generalization of the Assignment Problem . . . . .	480
G.2 Monetary and Fiscal Policy Under Flexible Exchange Rates . . . . .	481
G.3 Perfect Capital Mobility . . . . .	483
G.4 References . . . . .	484
<b>H Appendix to Chapter 12</b>	<b>485</b>
H.1 The Classical Theory . . . . .	485
H.2 The Monetary Approach to the Balance of Payments . . . . .	486
H.2.1 The Effects of a Devaluation . . . . .	489
H.3 References . . . . .	490
<b>I Appendix to Chapter 13</b>	<b>491</b>
I.1 Partial-Equilibrium Asset Adjustment . . . . .	491
I.2 Portfolio and Macroeconomic Equilibrium under Fixed Exchange Rates . . . . .	493
I.2.1 The Dynamics of the Long-Run Equilibrium . . . . .	494
I.2.2 The Stability Conditions . . . . .	495
I.3 Portfolio and Macroeconomic Equilibrium under Flexible Exchange Rates . . . . .	498
I.3.1 The Basic Model . . . . .	498
I.3.2 Static Expectations . . . . .	500
I.3.2.1 Short-Run Equilibrium . . . . .	500
I.3.2.2 Long-Run Equilibrium . . . . .	502
I.3.3 Rational Expectations . . . . .	507

I.4	References . . . . .	508
<b>J</b>	<b>Appendix to Chapter 14</b>	<b>509</b>
J.1	Exports, Growth, and the Balance of Payments . . . . .	509
J.2	Growth-Oriented Adjustment Programs . . . . .	511
J.2.1	The Monetary Model . . . . .	511
J.2.2	The Real Growth Model . . . . .	511
J.2.3	The Integrated Model . . . . .	512
J.3	References . . . . .	514
<b>K</b>	<b>Appendix to Chapter 15</b>	<b>515</b>
K.1	PPP and the Harrod-Balassa-Samuelson Effect . . . . .	515
K.2	The Dornbusch Overshooting Model . . . . .	516
K.3	The Modern Approach to Exchange-Rate Determination . . . . .	517
K.3.1	The Monetary Approach . . . . .	517
K.3.2	The Portfolio Approach . . . . .	519
K.3.3	Empirical Studies . . . . .	520
K.3.4	Currency Substitution . . . . .	524
K.4	Chaos Theory and the Exchange Rate . . . . .	524
K.5	References . . . . .	528
<b>L</b>	<b>Appendix to Chapter 16</b>	<b>531</b>
L.1	A First-Generation Model . . . . .	531
L.2	A Second-Generation Model . . . . .	532
L.3	References . . . . .	533
<b>M</b>	<b>Appendix to Chapter 17</b>	<b>535</b>
M.1	The Shock-Insulating Properties of Fixed and Flexible Exchange Rates . . . . .	535
M.2	The Effects of Various Shocks . . . . .	536
M.2.1	Money Demand Shock . . . . .	537
M.2.2	Aggregate Demand Shock . . . . .	538
M.2.3	Aggregate Supply Shock . . . . .	539
M.2.4	Conclusion . . . . .	541
M.3	The Intertemporal Approach . . . . .	541
M.4	References . . . . .	541
<b>N</b>	<b>Appendix to Chapter 18</b>	<b>543</b>
N.1	The Two-period Case . . . . .	543
N.2	An Infinite Horizon Model . . . . .	545
N.3	The RAIOM Approach to the Real Exchange Rate . . . . .	547
N.4	The NATREX Approach . . . . .	550
N.4.1	The SOFC Rule and the Investment Function . . . . .	550
N.4.1.1	The Optimal Feedback Control Rule . . . . .	552

N.4.1.2	The Sub-Optimal Feedback Control (SOFC) Rule . . . . .	553
N.4.2	Analysis of the NATREX Equilibrium . . . . .	554
N.4.2.1	The Medium Run . . . . .	554
N.4.2.2	The Long Run . . . . .	555
N.5	References . . . . .	556
<b>O</b>	<b>Appendix to Chapter 19</b>	<b>557</b>
O.1	The Dynamic Optimization Problem . . . . .	557
O.2	The Net Borrower Nation . . . . .	560
O.2.1	Steady-State Stability and Comparative Dynamics . . . . .	561
O.3	Nominal Rigidities . . . . .	563
O.3.1	The Consumption-Based Price Index . . . . .	563
O.3.2	The Composite Nontraded Good, and Its Demand Function . . . . .	564
O.3.3	The Intertemporal Optimization Problem . . . . .	567
O.3.3.1	Steady-State Equilibrium . . . . .	570
O.3.3.2	Short-run Effects of an Unanticipated Money Shock . . . . .	570
O.4	References . . . . .	572
<b>P</b>	<b>Appendix to Chapter 20</b>	<b>573</b>
P.1	Fiscal Policy in a Monetary Union . . . . .	573
P.2	Fiscal Coordination . . . . .	577
P.3	References . . . . .	578
<b>Q</b>	<b>Appendix to Chapter 23</b>	<b>579</b>
Q.1	The Maximization of a Welfare Function . . . . .	579
Q.2	Intertemporal Maximization and the Normative Theory of Economic Policy . . . . .	581
Q.3	The Composition of International Reserves . . . . .	586
Q.4	A Portfolio Model of the Euro-Market . . . . .	587
Q.5	References . . . . .	591
<b>R</b>	<b>Appendix to Chapter 24</b>	<b>593</b>
R.1	International Policy Coordination . . . . .	593
R.2	Target Zones . . . . .	595
R.3	The Tobin Tax . . . . .	597
R.3.1	A Simple Model . . . . .	599
R.4	References . . . . .	600
<b>Index</b>		<b>601</b>

# List of Figures

3.1	Monetary authorities' intervention to peg the exchange rate . . . . .	34
7.1	Multiple equilibria and stability . . . . .	90
7.2	The arbitrageurs' excess demand for forward exchange . . . . .	93
7.3	Commercial traders' excess demand for forward exchange . . . . .	93
7.4	Speculators' excess demand for forward exchange . . . . .	94
7.5	Equilibrium in the forward exchange market . . . . .	95
8.1	Exogenous increase in exports, the multiplier, and the balance of payments . . . . .	104
8.2	Exogenous increase in imports, the multiplier, and the bal- ance of payments: case (i) . . . . .	107
8.3	Exogenous increase in imports, the multiplier, and the bal- ance of payments: case (ii) . . . . .	108
9.1	Flexible exchange rates and the level of income: the balance- of-payments schedule . . . . .	119
9.2	Flexible exchange rates and the level of income: the real- equilibrium schedule . . . . .	121
9.3	Flexible exchange rates and the level of income: the dynamics	123
9.4	The transfer problem under flexible exchange rates . . . . .	125
10.1	Mundell-Fleming under fixed exchange rate: the real equilib- rium schedule . . . . .	135
10.2	Mundell-Fleming under fixed exchange rates: the monetary equilibrium schedule . . . . .	137
10.3	Shifts in the monetary equilibrium schedule . . . . .	138
10.4	Mundell-Fleming under fixed exchange rates: the external- equilibrium schedule . . . . .	138
10.5	Mundell-Fleming under fixed exchange rates: macroeconomic equilibrium . . . . .	140
10.6	Mundell-Fleming under fixed exchange rates: dynamic anal- ysis of the adjustment process . . . . .	142
10.7	The burden of interest payments and the BB schedule . . . . .	146
10.8	The transfer problem under fixed exchange rates . . . . .	148

10.9 Effects of a once-and-for-all devaluation . . . . .	150
10.10 The Mundell-Fleming model under flexible exchange rates . . . . .	152
11.1 Fiscal and monetary policy for internal and external balance under fixed exchange rates: first case . . . . .	158
11.2 Fiscal and monetary policy for internal and external balance under fixed exchange rates: second case . . . . .	159
11.3 Flexible exchange rates and policies for internal and external balance: high capital mobility . . . . .	164
11.4 Flexible exchange rates and policies for internal and external balance: low capital mobility . . . . .	165
11.5 Perfect capital mobility and fiscal and monetary policy under fixed and flexible exchange rates . . . . .	167
13.1 Determination of portfolio equilibrium in an open economy . . . . .	188
13.2 Monetary policy, portfolio equilibrium and capital flows . . . . .	189
13.3 Static expectations: short-run equilibrium and economic policy	204
13.4 Rational expectations: short-run equilibrium and economic policy . . . . .	207
13.5 Rational expectations and long-run equilibrium . . . . .	208
13.6 Rational expectations, news, and overshooting . . . . .	209
14.1 The integrated monetary/growth model . . . . .	218
15.1 Rational Expectations and exchange-rate overshooting . . . . .	232
15.2 Exchange-rate determination: interaction between the current account and the capital account . . . . .	235
16.1 An example of profitable destabilizing speculation . . . . .	255
16.2 Debt levels, crises, and multiple equilibria . . . . .	263
16.3 Balance sheets and financial crises . . . . .	268
18.1 Intertemporal trade: pure consumption . . . . .	299
18.2 Intertemporal trade: production and investment . . . . .	301
18.3 The NATREX model: medium-run dynamics . . . . .	312
18.4 The NATREX model: long-run dynamics . . . . .	313
23.1 The portfolio approach to the Euro-market . . . . .	399
24.1 The Hamada diagram . . . . .	407
24.2 The international policy game: Cournot-Nash, Stackelberg, and cooperative solution . . . . .	409
Q.1 The dynamics of the optimum reserve level . . . . .	584

# List of Tables

6.1	An accounting matrix for real and financial flows . . . . .	70
18.1	Effects of a devaluation according to the absorption approach	296
24.1	Payoff matrix of the international policy game . . . . .	406