

Contents

<i>List of Figures</i>	xv
<i>List of Tables</i>	xviii
<i>List of Contributors</i>	xix
<i>Preface</i>	xxi

PART I MICRO FOUNDATIONS OF INTERNATIONAL MACROECONOMICS	1
1 Quantity-constrained Models of Open Economies NEIL RANKIN	3
1 INTRODUCTION	3
2 REAL MODELS	5
2.1 Short run and long run	5
2.2 The representative household	7
2.3 The representative firm	8
2.4 The government	9
2.5 Keynesian unemployment in the short run and the long run	10
2.6 Keynesian unemployment in the short run and Walrasian equilibrium in the long run	13
2.7 Discussion	15
3 MONETARY MODELS	16
3.1 Cash in advance	17
3.2 Utility of real balances	20
4 CONCLUSIONS	26

2	Imperfect Competition and Open Economy Macroeconomics	
	Huw D. Dixon	31
1	INTRODUCTION	31
2	A TWO-SECTOR MODEL OF A SMALL OPEN ECONOMY	33
	2.1 Households	34
	2.2 The export sector	36
	2.3 The domestic sector	36
	2.4 Balance of payments and nominal national income	37
3	MACROECONOMIC EQUILIBRIUM	38
4	MACROECONOMIC POLICY UNDER A FIXED EXCHANGE RATE	41
	4.1 Monetary policy	41
	4.2 Fiscal policy	43
5	MACROECONOMIC POLICY UNDER A FLOATING EXCHANGE RATE	45
6	BALANCED TRADE WITH FREE ENTRY AND EXIT OF FIRMS	49
7	INTRA-INDUSTRY TRADE AND EXCHANGE RATE PASS-THROUGH	53
	7.1 Domestic sector equilibrium	54
	7.2 National income	55
	7.3 Devaluation and pass-through	56
8	CONCLUSION	59
3	Relative Price Movements in Dynamic General Equilibrium Models of International Trade	
	David K. Backus, Patrick J. Kehoe, and Finn E. Kydland	62
1	INTRODUCTION	62
2	FIRST LOOK AT THE DATA FOR THE TERMS OF TRADE, NET EXPORTS, AND REAL OUTPUT	65
3	A DYNAMIC EXCHANGE ECONOMY	67
	3.1 Consumer behavior	68
	3.2 Competitive equilibrium	68
	3.3 Movements of the terms of trade and net exports	70
4	PREFERENCE FOR HOME GOODS	73
5	THE MARSHALL-LERNER CONDITION AND THE HARBERGER-LAURSEN-METZLER EFFECT	77
	5.1 A closer look at the Marshall-Lerner condition	77
	5.2 Revival of the Harberger-Laursen-Metzler effect	79
6	GOVERNMENT SPENDING	81
7	TRADE AND CAPITAL FORMATION	83

7.1	The theoretical two-country framework	84
7.2	Behavior of the terms of trade	85
7.3	Net exports and the terms of trade	88
8	FINAL THOUGHTS	91
	APPENDIX	91
PART II CAPITAL TAXATION AND REAL MODELS		97
4	International Fiscal Policy Coordination and Competition	
	ASSAF RAZIN AND EFRAIM SADKA	99
1	INTRODUCTION	99
2	PRINCIPLES OF INTERNATIONAL TAXATION	100
	2.1 Capital income (direct) taxation	100
	2.2 Commodity (indirect) taxation	102
3	OPTIMAL TAXATION AND CAPITAL MOVEMENTS	103
	3.1 A stylized two-period model	104
	3.2 Optimal fiscal policy	107
4	TAX COMPETITION AND TAX COORDINATION: INTERNATIONAL PRICE-TAKING BEHAVIOR	107
5	EXTENSIONS: TERMS OF TRADE MANIPULATION AND DISCRETIONARY POLICY	112
5	Capital Taxation in the World Economy	
	A. LANS BOVENBERG	116
1	INTRODUCTION	116
2	INTERTEMPORAL EQUILIBRIUM OF A SMALL OPEN ECONOMY	120
	2.1 Consumption and saving behavior	120
	2.2 Production and investment	121
	2.3 Government	123
	2.4 The model solution	123
3	A RESIDENCE-BASED TAX	123
	3.1 The intergenerational distribution	124
	3.2 Economy-wide consumption	125
	3.3 Trade balance and net foreign assets	125
	3.4 Neutralizing the effects on the intergenerational distribution	127
	3.5 Neutralizing the intertemporal substitution effects	128
4	A SOURCE-BASED TAX	128
	4.1 Investment and capital accumulation	128
	4.2 The intergenerational distribution	129

4.3	Consumption and saving	131
4.4	Trade balance and net foreign assets	133
4.5	Neutralizing the effects on the intergenerational distribution	133
4.6	Neutralizing the effects on the required return on new investment	134
5	CONCLUSIONS AND SUGGESTIONS FOR FUTURE RESEARCH	134
	APPENDIX 1: The investment system	138
	APPENDIX 2: The saving system	140
	APPENDIX 3: Welfare analysis of the residence-based tax	143
	PART III INTERNATIONAL MONETARY REGIMES	151
6	History of the International Monetary System: Implications for Research in International Macroeconomics and Finance BARRY EICHENGREEN	153
1	INTRODUCTION	153
2	HISTORICAL OVERVIEW	154
2.1	The classical gold standard	154
2.2	The interwar years	158
2.3	Bretton Woods and its aftermath	165
3	STATISTICAL OVERVIEW	168
3.1	The volatility of gross domestic product	169
3.2	Cross-country correlations	172
3.3	Interwar comparisons	175
3.4	Components of national income	179
4	IMPLICATIONS FOR RESEARCH	182
7	On Inflation, Unemployment, and the Optimal Exchange Rate Regime GEORGE ALOGOSKOUFIS	192
1	INTRODUCTION	192
2	A SIMPLE OPEN ECONOMY MACROMODEL	196
2.1	The supply side	197
2.2	The demand side	198
3	MONETARY VERSUS EXCHANGE RATE TARGETS	199
3.1	A fixed rate of growth for the money supply	199
3.2	A fixed nominal exchange rate	201
3.3	Monetary versus exchange rate targets	202
4	OPTIMAL EXCHANGE RATE MANAGEMENT	203

4.1	Optimal exchange rate management with an efficient "natural" rate	204
4.2	Optimal exchange market intervention under uncertainty	206
4.3	Optimal exchange rate management with an inefficient "natural" rate	208
4.4	Fixed versus managed exchange rates	210
4.5	Credibility and regime changes	212
5	EXCHANGE RATE REGIMES IN INTERDEPENDENT ECONOMIES	215
6	CONCLUSIONS	217
8	Macroeconomic Policy, Speculative Attacks, and Balance of Payments Crises	
	PIERRE-RICHARD AGENOR AND ROBERT P. FLOOD	224
1	INTRODUCTION	224
2	A BASIC FRAMEWORK	225
2.1	A model of a small open economy	225
2.2	The shadow floating exchange rate	227
2.3	Date of speculative attack	228
3	EXTENSIONS TO THE BASIC FRAMEWORK	231
3.1	Alternative post-collapse regimes	231
3.2	Uncertainty and the timing of speculative attacks	232
3.3	Imperfect substitutability and sticky prices	235
3.4	Real effects of an anticipated collapse	236
3.5	Borrowing, controls, and the postponement of a crisis	237
3.6	Policy switches and the avoidance of a collapse	240
4	SOME RESEARCH PERSPECTIVES	242
4.1	State space methods	242
4.2	Reputation as a deterrent to speculative attacks	243
5	CONCLUSIONS	244
9	Continuous-time Models of Exchange Rates and Intervention	
	GIUSEPPE BERTOLA	251
1	INTRODUCTION	251
2	CERTAINTY	252
2.1	Integration	252
2.2	Money demand and arbitrage-free equilibrium	256
3	UNCERTAINTY	262
3.1	Stochastic processes	263
3.2	Economic interpretation	273

4	TARGET ZONES AND REGIME SWITCHES	275
4.1	The basic target zone model	276
4.2	Implications	279
4.3	Interventions and realignments	280
4.4	Reserves and other state variables	282
4.5	Different driving processes	284
4.6	Different equilibrium conditions	285
4.7	Bubbles and indeterminacies	288
5	INTERVENTIONS IN EXCHANGE RATES AND OTHER CONTEXTS	289
 PART IV CAPITAL MARKETS, MONEY, AND EXCHANGE RATES		 299
10	Partial Equilibrium versus General Equilibrium Models of the International Capital Market	
	BERNARD DUMAS	301
1	INTRODUCTION	301
2	THE STYLIZED FACTS	304
3	INTERNATIONAL CAPITAL ASSET PRICING MODELS AND UNCOVERED INTEREST RATE PARITY	305
3.1	Heterogeneity created by consumption goods prices: the international capital asset pricing model	305
3.2	Portfolio holdings in equilibrium	310
3.3	The lessons of international portfolio theory	312
3.4	Other capital asset pricing models applicable to international returns	314
4	COMPARING EMPIRICAL METHODS	316
4.1	Constant risk premia	316
4.2	Instrumental variables	317
4.3	Latent variables models	321
4.4	The arbitrage pricing theory and multi-factor capital asset pricing models	323
4.5	Autoregressive conditional heteroskedasticity	325
4.6	The full conditional version of the capital asset pricing model	326
4.7	Implied pricing kernels	328
4.8	Conclusion: what have we learned from empirical capital asset pricing models?	328
5	GENERAL EQUILIBRIUM MODELS WITHOUT MONEY	330
5.1	The difficulty with general equilibrium models	330
5.2	General equilibrium models without frictions	331
5.3	General equilibrium models with frictions	332

6	ISSUES AND CONCLUSIONS REGARDING GENERAL EQUILIBRIUM MODELS	335
11	Stylized Facts of Nominal Exchange Rate Returns CASPER G. DE VRIES	348
1	MOTIVATION	348
2	EMPIRICAL REGULARITIES	350
2.1	No-arbitrage conditions	350
2.2	Statistical regularities	356
2.3	Artifacts	360
3	THEORY	365
3.1	Arbitrage and unit roots	365
3.2	The unconditional distribution function and extreme value theory	374
3.3	The conditional distribution function	379
12	Currency Substitution ALBERTO GIOVANNINI AND BART TURTELBOOM	390
1	INTRODUCTION	390
2	THEORETICAL MODELS	394
2.1	Cash-in-advance models	394
2.2	Transactions costs models	398
2.3	Implications of currency substitutability	402
3	EMPIRICAL EVIDENCE	404
3.1	A first glance	404
3.2	Econometrics	411
3.3	Parameter estimates	417
4	POLICY QUESTIONS	418
5	CONCLUDING OBSERVATIONS	424
	PART V DEBT, DEFICITS, AND GROWTH	437
13	Sovereign Immunity and International Lending KENNETH M. KLETZER	439
1	INTRODUCTION	439
2	REPAYMENT INCENTIVES AND SOVEREIGN BORROWING	441
3	POTENTIAL REPUDIATION AND WILLINGNESS TO REPAY	443

3.1	Lending and the threat of sanctions	443
3.2	Threat of a permanent embargo on new loans	444
4	BARGAINING OVER PAYMENTS	446
4.1	Foreign creditors' ability to disrupt commodity trade	446
4.2	Subgame perfect equilibrium division of the gains from trade	447
4.3	Interpretation of trade between exportables and sanctions	448
5	INTERTEMPORAL EXCHANGE AND SOVEREIGNTY	451
5.1	A consumption-smoothing model of sovereign borrowing	451
5.2	Self-enforcing lending	458
5.3	Debt contracts	463
5.4	Renegotiation and the role of debt contracts	464
6	CONCLUSION: SOME IMPLICATIONS FOR POLICYMAKING	469
14	Growth and External Debt	
	DANIEL COHEN	480
1	INTRODUCTION	480
2	INTERTEMPORAL BUDGET CONSTRAINTS FOR INDIVIDUALS AND FOR NATIONS	481
3	THE RISK OF DEBT REPUDIATION	485
3.1	An infinite horizon benchmark with frictionless access to the world financial market	485
3.2	The risk of debt repudiation	486
3.3	The solvency of a growing economy	489
4	PATTERNS OF GROWTH OF A DEBTOR COUNTRY	489
4.1	A model of growth and external debt	490
4.2	Financial autarky	490
4.3	Free access to world financial markets	492
4.4	Credit rationing	492
4.5	The transition to the steady state	495
5	HOW TO WRITE OFF THE DEBT?	495
5.1	A theoretical background: marginal and average prices	496
5.2	Econometric estimates	498
6	WHAT WILL BE THE FIFTH STAGE?	499
	APPENDIX 1: Financial autarky, default, and free access to the world financial markets	500
	APPENDIX 2: The smooth repayment case	501

15	Savings, Investment, and the Current Account	
	PARTHA SEN	506
1	INTRODUCTION	506
2	HOUSEHOLD PREFERENCES AND SAVING	508
	2.1 Two-period models	508
	2.2 Infinite-horizon models	510
	2.3 Infinite-horizon model with new births	512
3	PRODUCERS AND INVESTMENT	514
	3.1 A two-period model	514
	3.2 Infinite-horizon one-good models	515
	3.3 Infinite-horizon two-sector models	516
4	THREE EXAMPLES	520
	4.1 The Harberger–Laursen–Metzler effect, oil prices etc.	520
	4.2 Fiscal policy	524
	4.3 The Feldstein–Horioka puzzle	526
5	OTHER SHOCKS AND SOME NEGLECTED AREAS	527
	APPENDIX	530
16	Growth, Deficits, and Research and Development in the Global Economy	
	FREDERICK VAN DER PLOEG AND PAUL TANG	535
1	INTRODUCTION	535
2	THE CAPITAL STOCK AND FISCAL POLICY	538
	2.1 An overlapping generations model for two countries	539
	2.2 Short-run dynamics and long-run equilibrium	542
3	NEW THEORIES OF ENDOGENOUS GROWTH	545
	3.1 Relationship to old theories of growth	546
	3.2 Learning by doing	547
	3.3 Human capital	548
	3.4 Research and development	549
	3.5 Public infrastructure	549
	3.6 Evaluation of various theories of endogenous growth	550
4	GROWTH AND DEVELOPMENT: CONVERGENCE OR DIVERGENCE?	552
	4.1 Saving, investment, and the current account	552
	4.2 International spillovers of investment	553
	4.3 Subsistence, poverty, and growth	554
5	KNOWLEDGE SPILLOVERS: AN INTERNATIONAL PERSPECTIVE	555
	5.1 Domestic and international spillovers in production	556

5.2	Loose budgetary policy stances destroy global growth prospects	557
5.3	External debt and government debt	561
5.4	Budgetary policies, interest rates, and adjustment costs for investment	562
5.5	Divergence in growth rates	564
6	RESEARCH AND DEVELOPMENT: AN ENGINE OF GROWTH	565
6.1	Expanding product variety	565
6.2	Knowledge spillovers, redundancy, and international trade	569
7	INVESTMENT AND TRADE-PROMOTING POLICY	571
7.1	Monopoly power, public policy, and growth	571
7.2	Trade and economic integration	572
7.3	Increasing returns and international competition	573
7.4	Political economy of growth	574
8	CONCLUDING REMARKS	575
	INDEX	580

List of Figures

1.1	Equilibrium in the Keynesian–Keynesian regime	11
1.2	Equilibrium in the Keynesian–Walrasian regime	14
1.3	Equilibrium in the two-country model	26
2.1	Imperfect competition and Pareto-improving monetary policy	43
2.2	Equilibrium consumption with balanced trade	47
2.3	Pass-through in the very short run	57
3.1	S-curves in the data: (a) Japan; (b) UK; (c) USA	72
3.2	Variability of the terms of trade	86
3.3	The trade balance and terms of trade	88
3.4	Cross-correlation function for the benchmark economy	89
3.5	Dynamic responses to a domestic productivity shock	90
5.1	Source-based taxation and consumption	131
6.1	Exchange rates	157
6.2	Exchange rates	158
6.3	Wholesale price index	159
6.4	Money supply	160
6.5	Industrial production	161
6.6	Long-term interest rates	162
6.7	Short-term interest rates	163
6.8	Variability of gross domestic product under different exchange rate regimes: (a), (b) standard deviation of gross domestic product, first-difference filter; (c), (d) standard deviation of gross domestic product, linear filter	170
6.9	Cross-country correlations of gross domestic product under different exchange rate regimes: (a) correlation of gross domestic product with USA, first-difference filter; (b) correlation of gross domestic product with USA, linear	

	filter; (c) correlation of gross domestic product with UK, first-difference filter; (d) correlation of gross domestic product with UK, linear filter	174
6.10	Variability of gross domestic product under different interwar exchange rate regimes: (a), (b) standard deviation of gross domestic product, first-difference filter; (c), (d) standard deviation of gross domestic product, linear filter	176
6.11	Cross-country correlations of gross domestic product under different interwar exchange rate regimes; (a), (b) correlation of gross domestic product with USA, first-difference filter; (c), (d) correlation of gross domestic product with USA, linear filter	178
6.12	Standard deviations and cross-country correlations of government spending ratios: (a), (b) standard deviation of government spending ratio; (c) correlation of government spending ratio with USA; (d) correlation of government spending ratio with UK	180
8.1	The process of balance of payments crisis	230
9.1	A regime switch under certainty	254
9.2	Absorption under uncertainty	270
9.3	Reflection under uncertainty	271
9.4	The basic target-zone model	278
10.1	Sample estimates of first-order autocorrelations of N -month real returns (continuously compounded) on the equally weighted New York Stock Exchange portfolio	318
10.2	R^2 values in regressions of N -month real returns (continuously compounded) on the equally weighted New York Stock Exchange portfolio on three predictive variables (the Baa yield minus the Aaa yield, the Aaa yield minus the T-bill yield, and the dividend-price ratio)	319
10.3	The function $\ln p(\omega)$	333
10.4	Sample path of the real exchange rate	334
12.1	The problem of multiple exchange rate equilibria	397
12.2	Foreign currency deposits	405
12.3	Dollarization and macroeconomic instability in Latin America: (a) Mexico; (b) Peru; (c) Bolivia; (d) Uruguay	406
12.4	Dollar deposits in Latin America: (a) Mexico; (b) Uruguay; (c) Peru	407
12.5	Currency substitution during the Russian hyperinflation, 1921-4	409
12.6	Cross-border deposits in the European Community	410

12.7	Deviation between M2 and extended monetary aggregates: (a) UK; (b) France; (c) Germany; (d) Italy	412
12.8	Residuals of standard money demand equations: (a) USA; (b) Canada; (c) Germany; (d) Japan	419
14.1	As z^* is increased (corresponding to a larger λ) the tangency point shifts towards the northeast: the country invests more and pays more	502
15.1	Saving and consumption in the two-period model	509
15.2	Saving and consumption with overlapping generations of infinitely lived households: (a) $\delta > r$; (b) $r > \delta$	514
15.3	Investment and adjustment costs	516
15.4	Dynamics of the real exchange rate if the traded sector is more capital intensive	519
15.5	Dynamics of the real exchange rate if the nontraded sector is more capital intensive	519
16.1	Classical growth and overlapping generations	543
16.2	Budget deficits and foreign debt	545
16.3	Overlapping generations and endogenous growth	558
16.4	Real interest rates and growth rates	563

List of Tables

3.1	Properties of the trade balance and the terms of trade	65
3.2	The trade balance, the terms of trade, and government purchases	66
3.3	Benchmark parameter values	85
3.4	Properties of theoretical economies with capital formation	87
10.1	Dollar amounts held in the portfolios	311
11.1	Unit root tests	351
11.2	Unit root simulations	351
11.3	Cointegration between $s(t+k)$ and $f(t)$	354
11.4	Tail indexes α	357
11.5	The GARCH model	360
11.6	Root mean square forecast errors	365
12.1	Cross-country regressions for money demand	420
16.1	Gross domestic product and augmented joint factor productivity (annual average compound growth rate)	536