Contents

List of figures xi
Foreword xvi
Introduction xvii
Notation xxii

PART I
Real-financial market interaction: Baseline approaches 1

1 Price dynamics and the macroeconomy 3
   1.1 Introduction 3
   1.2 Keynesian AD–AS analysis 3
   1.3 Conclusions 11
   1.4 References 11

2 Stock market and the macroeconomy 13
   2.1 Introduction 13
   2.2 The Blanchard model 18
   2.3 Analysis of the Blanchard model 20
   2.4 The jump variable technique 28
   2.5 Conclusions 37
   2.6 References 39
   2.7 Appendix: Some observations 39

3 Bond market, term structure and the macroeconomy 42
   3.1 Introduction 42
   3.2 The model 48
   3.3 Instability and the jump variable technique 51
   3.4 Alternatives to the jump variable technique 62
   3.5 Conclusions 82
   3.6 References 84
   3.7 Appendix: Budget equations 85

4 Exchange rate and the macroeconomy 87
   4.1 Introduction 87
   4.2 Exchange rate dynamics in the IS–LM–PC model: Level-form formulation 87
   4.3 Exchange rate dynamics in the IS–LM–PC model: Loglinear analysis 90
Contents

4.4 Rational expectations in open economy IS–LM–PC dynamics 102
4.5 References 117
4.6 Notation 118

5 Exchange rate, the stock market and the macroeconomy: A baseline
two-country model
5.1 Introduction 120
5.2 Overshooting exchange rate dynamics 122
5.3 Symmetric two-country macrodynamics: A baseline model 124
5.4 Blanchard-type stock-market–goods-market interactions 134
5.5 Synthesizing Blanchard stock-market with Dornbusch exchange
rate dynamics in a two-country framework 135
5.6 A model-adequate reformulation of the Taylor interest
rate rule 138
5.7 Symmetric countries: Stability analysis 141
5.8 Adding inflation dynamics 143
5.9 Outlook: imperfect capital markets 146
5.10 References 147

PART II

Stock market dynamics and the macroeconomy: Some extensions 149

6 Output and stock market dynamics with state-dependent financial market
reactions
6.1 Introduction 151
6.2 The model 152
6.3 Analysis of the model 156
6.4 State-of-market dependent reaction speed – an alternative to the
JVT 162
6.5 Relaxing perfection 173
6.6 Conclusion 185
6.7 References 187

7 Real–financial market interaction: Implications of budget equations and
capital accumulation
7.1 Introduction 190
7.2 The Blanchard model with intrinsic stock-flow dynamics 192
7.3 Intensive form of the model 194
7.4 Analysis 196
7.5 Jump variable conundrums 205
7.6 Conclusions 210
7.7 References 210
7.8 Appendix: Adding the dynamics of the government budget
constraint 211

8 Bounded rationality and the real–financial interaction: A stochastic analysis 215
8.1 Introduction 215
8.2 Notation 217
8.3 The model 218
8.4 Heterogenous expectations 221
8.5 Analysis of the deterministic skeleton 223
8.6 Analysis of the nonlinear stochastic model 233
8.7 Conclusions 236
8.8 References 239

9 A high-dimensional model of real-financial market interaction 240
9.1 Introduction 240
9.2 Formulation of the model 241
9.3 The model in intensive form 246
9.4 Subdynamics in the real and financial sector 248
9.5 Local stability analysis of the full 7D dynamics 252
9.6 Conclusions 258
9.7 References 259

10 Stock market, interest rate and output: A model and estimation for US time series data 261
10.1 Introduction 261
10.2 Stylized facts and macromodels 262
10.3 A generalized Blanchard model 266
10.4 The dynamics of the model 272
10.5 Discrete time form for observable variables 274
10.6 Empirical results for US time series data 276
10.7 Stochastic simulations and impulse response functions 278
10.8 Conclusions 287
10.9 References 288
10.10 Appendix 1: Stability analysis of the Blanchard model 290
10.11 Appendix 2: The characteristic equation of the generalized Blanchard model 291

PART III
Exchange rate dynamics, capital flows and currency crises 293

11 Capital account and government budget dynamics in perfect open economies 295
11.1 Introduction 295
11.2 Notation 295
11.3 The basic one-good monetary model of international commodity trade 296
11.4 The monetary adjustment process 301
11.5 The two-commodity extension 311
11.6 The perfectly open economy: Basic and advanced formulations 318
11.7 Twin deficits and PPP/UIP-driven price dynamics 332
11.8 Active fiscal and monetary policy in the perfect open economy 336
11.9 Conclusions 341
11.10 References 341
11.11 Appendix: Two-country and other extensions of the model 341

12 Twin deficits and inflation in the Mundell–Fleming–Tobin model 344
12.1 Introduction 344
12.2 Temporary equilibrium 345
12.3 The six economic regimes of the model 352
12.4 Twin deficits and price level dynamics under fixed and floating exchange rates 360
Contents

12.5 Capital account and inflation with interest and exchange rate pegs 371
12.6 Overshooting exchange rate dynamics 376
12.7 Conclusions 381
12.8 References 381

13 Financial crisis, currency crisis and large output loss 382
13.1 Introduction 382
13.2 Stylized facts 383
13.3 The basic model 385
13.4 Budget restrictions and national accounting 391
13.5 Dynamics under flexible exchange rates 397
13.6 Currency crisis in a fixed exchange rate regime 405
13.7 Conclusions 412
13.8 References 413

14 Emerging market economies, currency crises and macroeconomic adjustment 415
14.1 Introduction 415
14.2 The basic model 416
14.3 Local stability analysis 424
14.4 Currency crises in a pegged exchange rate system 425
14.5 Currency crises and hedging 428
14.6 Adding wage and price dynamics 436
14.7 The dynamics of a currency crisis in our extended model 444
14.8 Conclusions 447
14.9 References 448

15 Outlook: International capital flows in the MFT approach 450
15.1 Introduction 450
15.2 Integrating international capital flows into the MFT approach 451
15.3 Real–financial disequilibrium dynamics: Some basic results 459
15.4 Capital flight, global players and the emergence of currency crises 471
15.5 Conclusions 472
15.6 References 473

Mathematical appendix: Some useful theorems 474
A1 The concepts of local stability and global stability in a system of differential equations 474
A2 Theorems that are useful for the stability analysis of a system of linear differential equations or the local stability analysis of a system of nonlinear differential equations 474
A3 Theorems that are useful for the global stability analysis of a system of nonlinear differential equations 477
A4 Theorems that are useful to establish the existence of closed orbits in a system of nonlinear differential equations 478
A5 References 481

Index 482