CONTENTS IN BRIEF

Introduction		1
Chapter 1	THE SOLOW GROWTH MODEL	6
Chapter 2	INFINITE-HORIZON AND OVERLAPPING-GENERATIONS MODELS	49
Chapter 3	ENDOGENOUS GROWTH	101
Chapter 4	CROSS-COUNTRY INCOME DIFFERENCES	150
Chapter 5	REAL-BUSINESS-CYCLE THEORY	189
Chapter 6	NOMINAL RIGIDITY	238
Chapter 7	DYNAMIC STOCHASTIC GENERAL-EQUILIBRIUM MODELS OF FLUCTUATIONS	312
Chapter 8	CONSUMPTION	365
Chapter 9	INVESTMENT	405
Chapter 10	UNEMPLOYMENT	456
Chapter 11	INFLATION AND MONETARY POLICY	513
Chapter 12	BUDGET DEFICITS AND FISCAL POLICY	584
Epilogue	THE FINANCIAL AND MACROECONOMIC CRISIS OF 2008 AND BEYOND	644
References		649
Indexes		686

CONTENTS

Preface to the Fourth Edition xix

Introduction 1

Chapter 1 THE SOLOW GROWTH MODEL 6

1.1 Some Basic Facts about Economic Growth 6
1.2 Assumptions 10
1.3 The Dynamics of the Model 15
1.4 The Impact of a Change in the Saving Rate 18
1.5 Quantitative Implications 23
1.6 The Solow Model and the Central Questions of Growth Theory 27
1.7 Empirical Applications 30
1.8 The Environment and Economic Growth 37
Problems 45

Chapter 2 INFINITE-HORIZON AND OVERLAPPING-GENERATIONS MODELS 49

Part A THE RAMSEY–CASS–KOOPMANS MODEL 49

2.1 Assumptions 49
2.2 The Behavior of Households and Firms 51
2.3 The Dynamics of the Economy 57
2.4 Welfare 63
2.5 The Balanced Growth Path 64
2.6 The Effects of a Fall in the Discount Rate 66
2.7 The Effects of Government Purchases 71

Part B THE DIAMOND MODEL 77

2.8 Assumptions 77
2.9 Household Behavior 78
2.10 The Dynamics of the Economy 81

2.11 The Possibility of Dynamic Inefficiency 88
2.12 Government in the Diamond Model 92
Problems 93

Chapter 3 ENDOGENOUS GROWTH 101

3.1 Framework and Assumptions 102
3.2 The Model without Capital 104
3.3 The General Case 111
3.4 The Nature of Knowledge and the Determinants of the Allocation of Resources to R&D 116
3.5 The Romer Model 123
3.6 Empirical Application: Time-Series Tests of Endogenous Growth Models 134
3.7 Empirical Application: Population Growth and Technological Change since 1 Million B.C. 138
3.8 Models of Knowledge Accumulation and the Central Questions of Growth Theory 143
Problems 145

Chapter 4 CROSS-COUNTRY INCOME DIFFERENCES 150

4.1 Extending the Solow Model to Include Human Capital 151
4.2 Empirical Application: Accounting for Cross-Country Income Differences 156
4.3 Social Infrastructure 162
4.4 Empirical Application: Social Infrastructure and Cross-Country Income Differences 164
4.5 Beyond Social Infrastructure 169
4.6 Differences in Growth Rates 178
Problems 183

Chapter 5 REAL-BUSINESS-CYCLE THEORY 189

5.1 Introduction: Some Facts about Economic Fluctuations 189
5.2 An Overview of Business-Cycle Research 193
5.3 A Baseline Real-Business-Cycle Model 195
5.4 Household Behavior 197
5.5 A Special Case of the Model 201
5.6 Solving the Model in the General Case 207

5.7 Implications 211
5.8 Empirical Application: Calibrating a Real-Business-Cycle Model 217
5.9 Empirical Application: Money and Output 220
5.10 Assessing the Baseline Real-Business-Cycle Model 226
Problems 233

Chapter 6 NOMINAL RIGIDITY 238

Part A EXOGENOUS NOMINAL RIGIDITY 239

6.1 A Baseline Case: Fixed Prices 239
6.2 Price Rigidity, Wage Rigidity, and Departures from Perfect Competition in the Goods and Labor Markets 244
6.3 Empirical Application: The Cyclical Behavior of the Real Wage 253
6.4 Toward a Usable Model with Exogenous Nominal Rigidity 255

Part B MICROECONOMIC FOUNDATIONS OF INCOMPLETE NOMINAL ADJUSTMENT 267

6.5 A Model of Imperfect Competition and Price-Setting 268
6.6 Are Small Frictions Enough? 275
6.7 Real Rigidity 278
6.8 Coordination-Failure Models and Real Non-Walrasian Theories 286
6.9 The Lucas Imperfect-Information Model 292
6.10 Empirical Application: International Evidence on the Output-Inflation Tradeoff 302
Problems 306

Chapter 7 DYNAMIC STOCHASTIC GENERAL-EQUILIBRIUM MODELS OF FLUCTUATIONS 312

7.1 Building Blocks of Dynamic New Keynesian Models 315
7.2 Predetermined Prices: The Fischer Model 319
7.3 Fixed Prices: The Taylor Model 322
7.4 The Calvo Model and the New Keynesian Phillips Curve 329

7.5	State-Dependent Pricing	332
7.6	Empirical Applications	337
7.7	Models of Staggered Price Adjustment with Inflation Inertia	344
7.8	The Canonical New Keynesian Model	352
7.9	Other Elements of Modern New Keynesian DSGE Models of Fluctuations	356
	Problems	361

Chapter 8 CONSUMPTION 365

8.1	Consumption under Certainty: The Permanent-Income Hypothesis	365
8.2	Consumption under Uncertainty: The Random-Walk Hypothesis	372
8.3	Empirical Application: Two Tests of the Random-Walk Hypothesis	375
8.4	The Interest Rate and Saving	380
8.5	Consumption and Risky Assets	384
8.6	Beyond the Permanent-Income Hypothesis	389
	Problems	398

Chapter 9 INVESTMENT 405

9.1	Investment and the Cost of Capital	405
9.2	A Model of Investment with Adjustment Costs	408
9.3	Tobin's q	414
9.4	Analyzing the Model	415
9.5	Implications	419
9.6	Empirical Application: q and Investment	425
9.7	The Effects of Uncertainty	428
9.8	Kinked and Fixed Adjustment Costs	432
9.9	Financial-Market Imperfections	436
9.10	Empirical Application: Cash Flow and Investment	447
	Problems	451

Chapter 10 UNEMPLOYMENT 456

10.1	Introduction: Theories of Unemployment	456
10.2	A Generic Efficiency-Wage Model	458
10.3	A More General Version	463

10.4 The Shapiro-Stiglitz Model 467
10.5 Contracting Models 478
10.6 Search and Matching Models 486
10.7 Implications 493
10.8 Empirical Applications 498
Problems 506

Chapter 11 INFLATION AND MONETARY POLICY 513

11.1 Inflation, Money Growth, and Interest Rates 514
11.2 Monetary Policy and the Term Structure of Interest Rates 518
11.3 The Microeconomic Foundations of Stabilization Policy 523
11.4 Optimal Monetary Policy in a Simple Backward-Looking Model 531
11.5 Optimal Monetary Policy in a Simple Forward-Looking Model 537
11.6 Additional Issues in the Conduct of Monetary Policy 542
11.7 The Dynamic Inconsistency of Low-Inflation Monetary Policy 554
11.8 Empirical Applications 562
11.9 Seignorage and Inflation 567
Problems 576

Chapter 12 BUDGET DEFICITS AND FISCAL POLICY 584

12.1 The Government Budget Constraint 586
12.2 The Ricardian Equivalence Result 592
12.3 Ricardian Equivalence in Practice 594
12.4 Tax-Smoothing 598
12.5 Political-Economy Theories of Budget Deficits 604
12.6 Strategic Debt Accumulation 607
12.7 Delayed Stabilization 617
12.8 Empirical Application: Politics and Deficits in Industrialized Countries 623
12.9 The Costs of Deficits 628
12.10 A Model of Debt Crises 632
Problems 639

Epilogue THE FINANCIAL AND MACROECONOMIC CRISIS OF 2008 AND BEYOND 644

References 649

Author Index 686

Subject Index 694