

raki i	introduction and Measurement Issues 19
<b>Chap</b> ter 1	Introduction 20
	What Is Macroeconomics? 20
	Gross Domestic Product, Economic Growth,
	and Business Cycles 21
	Macroeconomic Models 25
	Microeconomic Principles 28
	Disagreement in Macroeconomics 29
	What Do We Learn from Macroeconomic Analysis? 30
	Understanding Recent and Current Macroeconomic Events 33
	Chapter Summary 51 Problems 53
	Key Terms 51 Working with the Data 54
	Questions for Review 52
Chapter 2	Measurement 55
	Measuring GDP: The National Income and Product Accounts 55
	Nominal and Real GDP and Price Indices 64
	MACROECONOMICS IN ACTION: Comparing Real GDP Across
	Countries and the Penn Effect 72
	MACROECONOMICS IN ACTION: House Prices and GDP
	Measurement 73
	Savings, Wealth, and Capital 75
	Labor Market Measurement 76
	MACROECONOMICS IN ACTION: Alternative Measures of the
	Unemployment Rate 78
	Chapter Summary 80 Problems 82
	Key Terms 80 Working with the Data 85
	Questions for Review 82
Chapter 3	Business Cycle Measurement 86
	Regularities in GDP Fluctuations 86

Chapter 4

Chapter 5

MACROECONOMICS IN ACTION: Economic Forecasting and the Financial Crisis 89 Comovement 90 The Components of GDP 96 Nominal Variables 99 Labor Market Variables 102 MACROECONOMICS IN ACTION: Jobless Recoveries 104 Seasonal Adjustment 106 MACROECONOMICS IN ACTION: The Great Moderation and the 2008-2009 Recession 107 Comovement Summary 109 Chapter Summary 110 Problems 112 Key Terms 110 Working with the Data 112 Questions for Review 111 A One-Period Model of the Macroeconomy PART II 113 Consumer and Firm Behavior: The Work–Leisure Decision and Profit Maximization 114 The Representative Consumer 115 The Representative Firm 134 MACROECONOMICS IN ACTION: How Elastic is Labor Supply? 135 MACROECONOMICS IN ACTION: Henry Ford and Total Factor Productivity 145 THEORY CONFRONTS THE DATA: Total Factor Productivity and the U.S. Aggregate Production Function 146 Chapter Summary 149 Problems 152 Key Terms 150 Working with the Data 154 Questions for Review 151 A Closed-Economy One-Period Macroeconomic Model 155 Government 156 Competitive Equilibrium 156 Optimality 163 Working with the Model: The Effects of a Change in Government Purchases 169 THEORY CONFRONTS THE DATA: Government Spending in World War II 171 Working with the Model: A Change in Total Factor Productivity 172

THEORY CONFRONTS THE DATA: Total Factor Productivity, Real GDP, and Energy Prices 177

MACROECONOMICS IN ACTION: Government Expenditures and the American Recovery and Reinvestment Act of 2009 180

A Distorting Tax on Wage Income, Tax Rate Changes, and the Laffer Curve 184

A Model of Public Goods: How Large Should the Government Be? 191

Chapter Summary 195 Key Terms 195

Problems 197

Working with the Data 199

Questions for Review 196

# Capter 6 Search and Unemployment 200

Labor Market Facts 201

MACROECONOMICS IN ACTION: Unemployment and Employment in the United States and Europe 205

A Diamond-Mortensen-Pissarides Model of Search and Unemployment 207

Working with the DMP Model 217

MACROECONOMICS IN ACTION: Unemployment Insurance and Incentives 219

THEORY CONFRONTS THE DATA: Productivity, Unemployment, and Real GDP in the United States and Canada: The 2008–2009

Recession 225

A Keynesian DMP Model 227

MACROECONOMICS IN ACTION: The Natural Rate of Unemployment and the 2008–2009 Recession 231

Chapter Summary 232

Problems 234

Key Terms 233

Working with the Data 235

Questions for Review 233

# PART III Economic Growth 237

# Chapter 7 Economic Growth: Malthus and Solow 238

Economic Growth Facts 239

The Malthusian Model of Economic Growth 244

The Solow Model: Exogenous Growth 255

THEORY CONFRONTS THE DATA: The Solow Growth Model, Investment Rates, and Population Growth 268

MACROECONOMICS IN ACTION: Resource Misallocation and Total Factor Productivity 270

	Growth in the United States 271  Growth Accounting 272  MACROECONOMICS IN ACTION: Development Accounting 279  Chapter Summary 281 Problems 283  Key Terms 282 Working with the Data 285  Questions for Review 282
Chapter 8	Income Disparity Among Countries and Endogenous Growth 286 Convergence 287
	THEORY CONFRONTS THE DATA: Is Income Per Worker Converging in the World? 292  MACROECONOMICS IN ACTION: Measuring Economic Welfare: Per Capita Income, Income Distribution, Leisure, and Longevity 293  Endogenous Crowth: A Model of Human Capital
	Endogenous Growth: A Model of Human Capital Accumulation 294  MACROECONOMICS IN ACTION: Education and Growth 303  Chapter Summary 305 Problems 306  Key Terms 305 Working with the Data 307  Questions For Review 305
PART IV	Savings, Investment, and Government Deficits 309
Chapter 9	A Two-Period Model: The Consumption–Savings Decision and Credit Markets 310
	A Two-Period Model of the Economy 311  THEORY CONFRONTS THE DATA: Consumption Smoothing and the Stock Market 327  The Ricardian Equivalence Theorem 339  MACROECONOMICS IN ACTION: The Economic Growth and Tax Relief Reconciliation Act and National Saving 349  THEORY CONFRONTS THE DATA: Government Financing Arithmetic: Are Government Budget Deficits Sustainable? 351  Chapter Summary 354 Problems 357  Key Terms 355 Working with the Data 359  Questions for Review 356
Chapter 10	Credit Market Imperfections: Credit Frictions, Financial Crises, and Social Security 360 Credit Market Imperfections and Consumption 362
	2.1

MACROECONOMICS IN ACTION: Recent Trends in Economic

Credit Market Imperfections, Asymmetric Information, and the Financial Crisis 365

THEORY CONFRONTS THE DATA: Asymmetric Information and Interest Rate Spreads 367

Credit Market Imperfections, Limited Commitment, and the Financial Crisis 369

THEORY CONFRONTS THE DATA: The Housing Market, Collateral, and Consumption 372

THEORY CONFRONTS THE DATA: Low Real Interest Rates and the Financial Crisis 379

Social Security Programs 381

MACROECONOMICS IN ACTION: Transitions from Pay-As-You-Go to Fully Funded Social Security 387

Chapter Summary 388

Problems 390

Key Terms 389

Working with the Data 392

Questions for Review 389

## Chapter 11 A Real Intertemporal Model with Investment 393

The Representative Consumer 394

The Representative Firm 400

THEORY CONFRONTS THE DATA: Investment and the Interest Rate Spread 412

Government 414

Competitive Equilibrium 415

The Equilibrium Effects of a Temporary Increase in *G*: Stimulus, the Multiplier, and Crowding Out 426

MACROECONOMICS IN ACTION: The Total Government Spending Multiplier: Barro vs. Romer 430

The Equilibrium Effects of a Decrease in the Current Capital Stock *K* 432

The Equilibrium Effects of an Increase in Current Total Factor Productivity *z* 433

The Equilibrium Effects of an Increase in Future Total Factor Productivity, z': News About the Future and Aggregate Economic Activity 436

THEORY CONFRONTS THE DATA: News, the Stock Market, and Investment Expenditures 437

Credit Market Frictions and the Financial Crisis 439

THEORY CONFRONTS THE DATA: Interest Rate Spreads and Aggregate Economic Activity 441

Sectoral Shocks and Labor Market Mismatch 443

PART V

Chapter 12

Chapter 13

THEORY CONFRONTS THE DATA: The Behavior of Real GDP, Employment, and Labor Productivity in the 1981–1982 and 2008–2009 Recessions 446			
Chapter Summary 449 Problems 451 Key Terms 450 Working with the Data 453 Questions for Review 450			
Money and Business Cycles 455			
Money, Banking, Prices, and Monetary Policy 456			
What Is Money? 457			
A Monetary Intertemporal Model 458			
A Level Increase in the Money Supply and Monetary Neutrality 472			
Shifts in Money Demand 475			
THEORY CONFRONTS THE DATA: Instability in the Money Demand			
Function 478			
The Short-Run Non-Neutrality of Money: Friedman–Lucas Money			
Surprise Model 480			
The Zero Lower Bound and Quantitative Easing 490 MACROECONOMICS IN ACTION: Empirical Evidence on			
Quantitative Easing 493			
Chapter Summary 496 Problems 499			
Key Terms 497 Working with the Data 500			
Questions for Review 498			
Business Cycle Models with Flexible Prices and			
Wages 501			
The Real Business Cycle Model 503			
A Keynesian Coordination Failure Model 511			
MACROECONOMICS IN ACTION: Business Cycle Models and the			
Great Depression 512			
A New Monetarist Model: Financial Crises and Deficient			
Liquidity 522			
MACROECONOMICS IN ACTION: Uncertainty and Business			

Chapter 14 New Keynesian Economics: Sticky Prices 537

The New Keynesian Model 539

The Nonneutrality of Money in the New Keynesian Model 541

Problems 535

Working with the Data 536

Cycles 532

Key Terms 534

Chapter Summary 533

Questions for Review 534

THEORY CONFRONTS THE DATA: Can the New Keynesian Model Under Fluctuations in the Interest Rate Target Explain Business Cycles? 543

THEORY CONFRONTS THE DATA: Keynesian Aggregate Demand Shocks as Causes of Business Cycles 544

The Role of Government Policy in the New Keynesian Model 546

Total Factor Productivity Shocks in the New Keynesian

Model 549

MACROECONOMICS IN ACTION: The Timing of the Effects of Fiscal and Monetary Policy 550

The Liquidity Trap and Sticky Prices 553

MACROECONOMICS IN ACTION: New Keynesian Models, the Zero Lower Bound, and Quantitative Easing 555

Criticisms of Keynesian Models 557

MACROECONOMICS IN ACTION: How Sticky Are Nominal

Prices? 558

Chapter Summary 559

Problems 561

Key Terms 560

Working with the Data 562

Questions for Review 560

### PART VI International Macroeconomics 563

# Chapter 15 International Trade in Goods and Assets 564

A Two-Period Small Open-Economy Model: The Current Account 565

THEORY CONFRONTS THE DATA: Is a Current Account Deficit a Bad Thing? 569

Production, Investment, and the Current Account 573

MACROECONOMICS IN ACTION: The World "Savings Glut" 580

Chapter Summary 581

Problems 583

Key Terms 582

Working with the Data 584

Questions for Review 582

# Chapter 16 Money in the Open Economy 585

The Nominal Exchange Rate, the Real Exchange Rate, and Purchasing Power Parity 586

THEORY CONFRONTS THE DATA: The PPP Relationship for the United states and Canada 588

Flexible and Fixed Exchange Rates 588

A Monetary Small Open-Economy Model with a Flexible Exchange Rate 591

THEORY CONFRONTS THE DATA: Why Did the U.S. Currency Appreciate After the Onset of the Financial Crisis? A Monetary Small Open Economy with a Fixed Exchange Rate 599 MACROECONOMICS IN ACTION: Sovereign Debt and the EMU 608 Capital Controls 610 MACROECONOMICS IN ACTION: Do Capital Controls Work in Practice? 614

A New Keynesian Sticky Price Open-Economy Model 615

Chapter Summary 620

Problems 623

Key Terms 621

Working with the Data 624

Questions for Review 622

#### PART VII Money, Banking, and Inflation

Money, Inflation, and Banking Chapter 17

Alternative Forms of Money 627

MACROECONOMICS IN ACTION: Commodity Money and Commodity-Backed Paper Money Yap Stones and Playing Cards 629

Money and the Absence of Double Coincidence of Wants: The Role of Commodity Money and Fiat Money 630

Long-Run Inflation in the Monetary Intertemporal Model 634 MACROECONOMICS IN ACTION: Should the Fed Reduce the

Inflation Rate to Zero or Less? 643

Financial Intermediation and Banking 644

MACROECONOMICS IN ACTION: Banks, Non-Bank Financial Intermediaries, Too-Big-to-Fail, and Moral Hazard

MACROECONOMICS IN ACTION: Bank Failures and Banking Panics in the United States and Canada 658

Chapter Summary 660

Problems 662

Key Terms 660

Working with the Data 663

Ouestions for Review 661

Inflation, the Phillips Curve, and Central Bank Chapter 18 Commitment 664

The Phillips Curve 665

The Phillips Curve, Inflation Forecasting, and the Fed's Dual Mandate 674

MACROECONOMICS IN ACTION: Commitment and Post Financial

Crisis Monetary Policy in the United States 676

Chapter Summary 677

Problems 678

Key Terms 678

Working with the Data 679

Questions for Review 678

# Appendix Mathematical Appendix 680

Chapter 4: Consumer and Firm Behavior 680

Chapter 5: A Closed-Economy One-Period

Macroeconomic Model 684

Chapter 6: Search and Unemployment 687

Chapters 7 and 8: Economic Growth 690

Chapter 9: A Two-Period Model 695

Chapter 11: A Real Intertemporal Model with Investment 698

Chapter 12: Money, Banking, Prices, and Monetary Policy 700

Chapter 17: Money, Inflation, and Banking 705

Chapter 18: Inflation, the Phillips Curve, and Central Bank

Commitment 709

#### Index 711