Brise ONTENTS

Chapter 1	Keeping Up with a Changing World—Trade Flows, Capital Flows, and the Balance of Payments 2				
Chapter 2	The Market for Foreign Exchange 28				
Chapter 3	Exchange-Rate Systems, Past to Present 58				
Chapter 4	The Forward Currency Market and International Financial Arbitrage 86				
Chapter 5	Interest Yields, Interest-Rate Risk, and Derivative Securities 112				
Chapter 6	International Banking, Central Banks, and Supranational Financial Policymaking Institutions 151				
Chapter 7	The International Financial Architecture and Emerging Economies 187				
Chapter 8	Traditional Approaches to Balance-of-Payments and Exchange-Rate Determination 220				
Chapter 9	Monetary and Portfolio Approaches to Balance-of-Payments and Exchange-Rate Determination 243				
Chapter 10	An Open Economy Framework 274				
Chapter 11	Economic Policy with Fixed Exchange Rates 314				
Chapter 12	Economic Policy with Floating Exchange Rates 348				
Chapter 13	The Price Level, Real Output, and Economic Policymaking 376				
Chapter 14	Domestic Economic Policymaking in a Global Economy 418				
Chapter 15	Policy Coordination, Monetary Union, and Target Zones 448				

CONTENTS

PREFACE xliv

PART 1	INTERNATIONAL	PAYMENTS AND	FXCHANGE	1
FANII	INTLINIALIUMAL	. I ALIVILIU AIV	LAVIIAITUL	

CHAPTER 1	Keeping Up with a Changing World—Trade Flows, Capital
	Flows, and the Balance of Payments 2

Why It Is Important to Understand International Money and Finance 3

International Economic Integration: The Importance of Global Trade and Financial Markets 3

The Real and Financial Sectors of an Economy 4
World Trade in Goods and Services 4

FUNDAMENTAL ISSUES

How Important Is the Global Market for Goods and Services? 5

International Transactions in Financial Assets 6
The Most Globalized Nations 7

- ✓ ON THE WEB 7
 The Most Globalized Firms 8
- FUNDAMENTAL ISSUES

 How Important Are the International Monetary and Financial

 Markets? 10

The Balance of Payments 10

ON THE WEB 10
Balance of Payments as a Double-Entry Bookkeeping
System 10

Balance-of-Payments Accounts		
The Current Account 12		



The Combined Current Account Deficit of Developed Nations Translates into a Combined Current Account Surplus for Emerging Countries 13

The Capital Account 14

W ON THE WEB 15

The Official Settlements Balance 15

Deficits and Surpluses in the Balance of Payments 16 Other Deficit and Surplus Measures 17

MANAGEMENT NOTEBOOK

Trade Deficits: Faulty Indicators of Business Activity 17

Examples of International Transactions and How They Affect the Balance of Payments 18

Example 1: Import of an Automobile 18

Example 2: A College Student Travels Abroad 19

Example 3: A Foreign Resident Purchases a Domestic

Treasury Bill 19

Example 4: The United States Pays Interest on a Foreign-Held Asset 20

Example 5: A Charitable Organization in the United States Provides Humanitarian Aid Abroad 20

Examples Combined 20

FUNDAMENTAL ISSUES

What Is a Country's Balance of Payments, and What Does This Measure? 20

The Capital Account and the International Flow of Assets 21

Example: A College Student 21

A Capital Account Surplus 21

The United States as a Net Debtor 22

<u> </u>	FUNDAMENTAL ISSUES
6 3	11/h - + D 14 1 1 f

What Does It Mean for a Country to Be a Net Debtor or Net Creditor? 23

Relating the Current Account Balance and Capital Flows 23

FUNDAMENTAL ISSUES

What Is the Relationship between a Nation's Current Account Balance and Its Capital Flows? 24

Chapter Summary 24

Questions and Problems 25

Online Applications 26

Selected References and Further Readings 27

CHAPTER 2 The Market for Foreign Exchange 28

Exchange Rates and the Market for Foreign Exchange 29

The Role of the Foreign Exchange Market 29

ONLINE NOTEBOOK 31 On the Internet, Currency Trading Spreads to the "Little Guy" 31



FUNDAMENTAL ISSUES

What Is the Foreign Exchange Market? 32

Exchange Rates as Relative Prices 32

Currency Appreciation and Depreciation 32

FUNDAMENTAL ISSUES

What Does It Mean When a Currency Has Appreciated or Depreciated? 33

Cross Rates 33

Bid-Ask Spreads and Trading Margins 34

The Bid-Ask Spread 34

The Bid-Ask Margin 34

ON THE WEB 35

Real Exchange Rates 35

The Effect of Price Changes 35

Measuring the Overall Strength or Weakness of a Currency: Effective Exchange Rates 36	
Constructing an Effective Exchange Rate 36	
A Two-Country Example of an Effective Exchange Rate 3	7
Constructing Bilateral Weights 37	
Determining Relative Exchange Rates 38	
What an Effective Exchange Rate Tells Us 38	
Real Effective Exchange Rates 39	
✓ ON THE WEB 40	
FUNDAMENTAL ISSUES	
How Is the General Value of a Currency Measured? 40	
Composite Currencies 40	
Special Drawing Right (SDR) 40	
Calculation of the SDR 41	
Foreign Exchange Arbitrage 42	
FUNDAMENTAL ISSUES What Is Foreign Exchange Arbitrage? 43	
The Demand for and Supply of Currencies 43	
The Demand for a Currency 43	
Illustrating the Demand Relationship: The Demand Curve 43	
MANAGEMENT NOTEBOOK Variations in the Dollar's Value Induce Colleges to Adjust Enrollments in Study-Abroad Programs 44	
A Change in Demand 45	
The Supply of a Currency 45	
Illustrating the Supply Relationship: The Supply Curve 45	5
A Change in Supply 46	
The Equilibrium Exchange Rate 47	
Illustrating the Market Equilibrium 47	
Example: A Change in Demand 47	
Foreign Exchange Market Intervention 48	

FUNDAMENTAL ISSUES

What Determines the Value of a Currency? 49

Absolute Purchasing Power Parity

Purchasing Power Parity 49

Arbitrage and PPP

Absolute PPP 50

Practical Problems and Shortcomings of Absolute PPP 51

MANAGEMENT NOTEBOOK

Significant Gains from Arbitrage Turn Out to Be Mainly Theoretical in Canada

Relative Purchasing Power Parity 52



ON THE WEB 52

FUNDAMENTAL ISSUES

What Is Purchasing Power Parity, and Is It Useful as a Guide to Movements in Exchange Rates? 54

Chapter Summary 54

Ouestions and Problems 55

Online Applications 56

Selected References and Further Readings

CHAPTER 3 **Exchange-Rate Systems, Past to Present 58**

Exchange-Rate Systems

ONLINE NOTEBOOK

Foreign Exchange Rates for Virtual Money Become a Reality 59

FUNDAMENTAL ISSUES

What Is an Exchange-Rate System? 60

The Gold Standard 60

The Gold Standard as an Exchange-Rate System 60

FUNDAMENTAL ISSUES How Does a Gold Standard Constitute an Exchange-Rate System? 61
Performance of the Gold Standard 62
Positive and Negative Aspects of a Gold Standard 62
The Economic Environment of the Gold Standard Era 62
The Collapse of the Gold Standard 63
The Bretton Woods System 63
ON THE WEB 64 The Bretton Woods Agreement 64
FUNDAMENTAL ISSUES What Was the Bretton Woods System of "Pegged" Exchange Rates? 66
Performance of the Bretton Woods System 66
The Gold Pool 66
President Nixon Closes the Gold Window 68
The Smithsonian Agreement and the Snake in the Tunnel 68
The Flexible-Exchange-Rate System 69
The Economic Summits and a New Order 69
Performance of the Floating-Rate System 69
✓ ON THE WEB 70
The Plaza Agreement and the Louvre Accord 70
The Euro 72
FUNDAMENTAL ISSUES What Post—Bretton Woods System of "Flexible" Exchange Rates Prevails Today? 73
Other Forms of Exchange-Rate Arrangements Today 73
Dollarization 74
POLICY NOTEBOOK
U.S. Inflation Creates Economic Pain in El Salvador 74
Independent Currency Authorities 75

9 9	FUND	AMEN	TAL I	SSU	ES
0.00					

What Is Dollarization, and What Is a Currency Board? 76

Conventional Peg and Pegged with Bands 76

Currency Baskets 76

Selecting a Currency Basket 77

MANAGEMENT NOTEBOOK

A New Currency Basket Offers Weights That Vary over Time 78

Managing the Currency Basket 78

Crawling Pegs 78

Nicaragua's Crawling-Peg Arrangement 79

FUNDAMENTAL ISSUES

What Types of Pegged-Exchange-Rate Arrangements Are Used Today? 79

Fixed or Floating Exchange Rates? 80

FUNDAMENTAL ISSUES

Which Is Best, a Fixed- or Flexible-Exchange-Rate Arrangement? 80

Chapter Summary 80

Questions and Problems 82

Online Applications 83

Selected References and Further Readings 83

PART 2 INTERNATIONAL FINANCIAL INSTRUMENTS, MARKETS, AND INSTITUTIONS 85

CHAPTER 4 The Forward Currency Market and International Financial Arbitrage 86

Foreign Exchange Risk 87

Types of Foreign Exchange Risk Exposure 87

Hedging Foreign Exchange Risk 88

	Contents
MANAGEMENT NOTEBOOK Japanese Automakers Ramp Up U.S. Product against a Depreciating Dollar 88	tion to Hedge
FUNDAMENTAL ISSUES What Is Foreign Exchange Risk? 89	
The Forward Exchange Market 89	
Covering a Transaction with a Forward Con	tract 89
Determination of Forward Exchange Rates	90
The Forward Exchange Rate as a Predictor Rate 90	of the Future Spot
FUNDAMENTAL ISSUES What Is the Forward Currency Market, and H Exchange Rates Determined? 92	ow Are Forward
International Financial Arbitrage 92	
The International Flow of Funds and Interest Determination 93	t Rate
Supply 93	
Demand 93	
Determination of the Market Interest Rate	94
Interest Parity 94	
Exchange Uncertainty and Covered Interest	Parity 95
Covered Interest Arbitrage 96	
Covered-Interest-Parity Grid 96	
Covered Interest Arbitrage and Savings F	lows 97
Adjustment to an Equilibrium 97	
FUNDAMENTAL ISSUES What Is Covered Interest Parity? 99	
Uncovered Interest Parity 99	
Uncovered Interest Arbitrage 99	
MANAGEMENT NOTEBOOK	

MANAGEMENT NOTEBOOK

Many Hungarians Literally Bet Their Houses on Exchange

Rates 100

Risk and Uncovered Interest Parity 101	
Risks Other Than Foreign Exchange Risk	101
Tests of Uncovered Interest Parity 102	
MANAGEMENT NOTEBOOK	

MANAGEMENT NOTEBOOK The Carry-Trade Strategy for International Investment 102

FUNDAMENTAL ISSUES What Is Uncovered Interest Parity? 103

Foreign Exchange Market Efficiency 103

Market Efficiency 104

Evidence on Foreign Exchange Market Efficiency 104

FUNDAMENTAL ISSUES

What Is Foreign Exchange Market Efficiency? 104

International Financial Markets 104

International Capital Markets 105
International Money Markets 105

Eurobonds, Euronotes, and Eurocommercial Paper 105

Eurocurrencies 106

Origins of the Eurocurrency Market 106 Relationship to the Forward Market 107

FUNDAMENTAL ISSUES

What Are the International Financial Markets? 108

Chapter Summary 108
Questions and Problems 109
Online Applications 110
Selected References and Further Readings 111

CHAPTER 5 Interest Yields, Interest Rate Risk, and Derivative Securities 112

Interest Rates 113
Interest Yields and Financial Instrument Prices 113

Interest Rates and Discounted Present Value 113
Discounted Present Value and the Market Price of
Bonds 114

🛛 ON THE WEB 115

 $oldsymbol{ol{ol{oldsymbol{ol{oldsymbol{ol{ol{ol}}}}}}}}}}}}}}$

Perpetuities and the Relationship between Interest Yields and Bond Prices 116

MANAGEMENT NOTEBOOK

Recalculating Libor 117

Term to Maturity and Interest Rate Risk 118

FUNDAMENTAL ISSUES

How Are Interest Yields, Financial Instrument Prices, and Interest Rate Risk Interrelated? 119

The Term Structure of Interest Rates 119

Yield Curves 119

Segmented Markets Theory 120

The Expectations Theory 120

The Preferred Habitat Theory 122

The Risk Structure of Interest Rates 122

Default Risk 123

Liquidity 123

Tax Differences 124

FUNDAMENTAL ISSUES

Why Do Market Interest Yields Vary with Differences in Financial Instruments' Terms to Maturity? 124

Interest Rate Differentials—Excess Returns and Failure of Uncovered Interest Parity 124

Breakdowns of Uncovered Interest Parity and Excess Returns 125

Excess Returns 125

Evidence on Excess Returns 125

Accounting for Differences in Excess Returns to Help Explain International Interest Rate Differences 125

Common Derivative Securities and Their Risks 135

Forward Contracts 135

Futures 135

X	ON	THE	WEB	136
-				

Interest Rate Futures 136
Stock-Index Futures 136
Currency Futures 136

🔀 ON THE WEB 137

Hedging with Currency Futures 137

Daily Futures Settlement 138

Options 139

Stock Options and Futures Options 139
Currency Options 139
Netting 142

Swaps 143

Currency Swaps 143
Types of Swaps 144

Derivatives Risks and Regulation 145

Measuring Derivatives Risks 145

Types of Derivatives Risks 145

FUNDAMENTAL ISSUES

What Are the Most Commonly Traded Derivative Securities? 146

Chapter Summary 146
Questions and Problems 147
Online Applications 149
Selected References and Further Readings 150

CHAPTER 6 International Banking, Central Banks, and Supranational Financial Policymaking Institutions 151

International Dimensions of Financial Intermediation 152

Financial Intermediation 152

Asymmetric Information 153
Adverse Selection 153
Moral Hazard 153
Economies of Scale 154

	Financial Intermediation across National Boundaries 154
	International Financial Intermediation 155
	Economies of Scale and Global Banking 155
9.97 676	FUNDAMENTAL ISSUES What Accounts for International Financial Intermediation, and How Do National Banking Systems Differ? 156
Glo	bal Payments and Financial System Risks 156
	Global Payment Systems 157
	Nonelectronic Payment Systems 157
	Electronic Payment Systems 158
Ø	ON THE WEB 158
	Payment-System Risks 158
	Liquidity Risk 159
	Credit Risk 159
	Systemic Risk 160
	Herstatt Risk 160
6.9	FUNDAMENTAL ISSUES What Are the World's Major Bank Payment Systems, and How Do the Risks That Arise in National Financial and Banking Systems Contribute to the Potential for Financial Instability and Crises? 161
	Financial Instability and International Financial Crises 161 Economic Imbalances and International Financial Crises 161
	Self-Fulfilling Expectations and Contagion Effects 162 Structural Moral Hazard Problems 162
	MANAGEMENT NOTEBOOK From Fish to Finance—and Back to Fish Again? 163
Ban	k Regulation and Capital Requirements 163
Ø	ON THE WEB 164 The Goals of Bank Regulation 164
	Limiting the Scope for Bank Insolvencies and Failures 164
	Maintaining Bank Liquidity 164

Promoting an Efficient Banking System 164

POLICY NOTEBOOK	
Engaging in War Games Pays Off for Bank Regulators	165

- ON THE WEB 165

 Bank Capital Requirements 166

 The Three Pillars of the Basel Regulatory System 167
- POLICY NOTEBOOK

 Will More Risk-Based Capital Regulation Make Banking More

 Procyclical? 167

Market-Based Regulation? 168

FUNDAMENTAL ISSUES What Objectives Do National Banking Regulators Seek to Achieve, and How Do They Implement Their Regulations? 169

Central Banks 169

- ON THE WEB 169
 Central Bank Assets 170
 Central Bank Liabilities and Net Worth 171
- FUNDAMENTAL ISSUES
 What Are the Main Assets and Liabilities of Central
 Banks? 172
- What Do Central Banks Do? 172
 - Central Banks as Government Banks 172

 Central Banks as Government Depositories 172

 Central Banks as Fiscal Agents 172
 - Central Banks as Bankers' Banks 173

 Do Banks "Need" a Central Bank? 173

 Lenders of Last Resort 173
 - Central Banks as Monetary Policymakers 174

 Interest Rates on Central Bank Advances 174

 Open-Market Operations 176

 Reserve Requirements 177

 Interest Rate Regulations and Direct Credit Controls

0.0	CHIN	UD A	MEN	ΤΛΙ	ICCL	EC
	LOI	NDP	/IVI E I V	IAL	เจจบ	EO

What Are the Primary Functions of Central Banks? 178

Supranational Financial Policymaking Institutions 178

The International Monetary Fund 178

The World Bank 181

FUNDAMENTAL ISSUES

What Are the Two Most Important Supranational Financial Policymaking Institutions, and What Are Their Functions in the International Financial System? 182

Chapter Summary 182

Questions and Problems 183

Online Applications 184

Selected References and Further Readings 185

CHAPTER 7 The International Financial Architecture and Emerging Economies 187

International Capital Flows 188

Explaining the Direction of Capital Flows 188

Foreign Direct Investment and Developed Nations 188

☑ ON THE WEB 188

Cross-Border Mergers and Acquisitions 189

ON THE WEB 190

The Emerging Economies 190

FUNDAMENTAL ISSUES

What Are the Most Important Developments in the Recent Evolution of Global Capital Markets? 191

Capital Allocations and Economic Growth 191

How Capital Inflows Can Smooth the Domestic Economy 192

How Capital Inflows Can Contribute to Long-Term Development 192

Capital Misallocations and Their Consequences 193

Market Imperfections 193

Policy-Created Distortions 193
Financial Instability and Financial Crises 194
Maximizing Benefits and Minimizing Risks 194
Where Do Financial Intermediaries Fit In? 195

FUNDAMENTAL ISSUES

What Is the Relationship between Capital Allocations and Economic Growth, and What Is the Role of Financial Intermediaries in This Relationship? 195

Capital Market Liberalization and International Financial Crises 196

Are All Capital Flows Equal? 196

Portfolio Capital Flows 196

Foreign Direct Investment 196

MANAGEMENT NOTEBOOK

Private Capital Flows: Source of Instability or Engine of Economic Development? 197

The Role of Capital Flows in Recent Crisis Episodes 198

ON THE WEB 198

Foreign Direct Investment as a Stabilizing Element 198
Is There a Role for Capital Controls? 199

FUNDAMENTAL ISSUES

What Is the Difference between Portfolio Capital Flows and Foreign Direct Investment, and What Role Did These Types of Capital Flows Play in Recent Financial Crises? 200

Exchange-Rate Regimes and Financial Crises 200
Schools of Thought on Exchange-Rate Regimes 200
The Corners Hypothesis 201
Dollarization 201

The Benefits of Dollarization 201

The Costs of Dollarization 202

Dollarized Economies 202

Peg, Take the Middle Road, or Float? 202

The "Trilemma" 203

POLICY NOTEBOOK
Differences in Cross-Country Patterns in Addressing the
Trilamma Issue 204

FUNDAMENTAL ISSUES

What Type of Exchange-Rate Regime Is Most Appropriate for Emerging Economies? 205

Evaluating the Status Quo 205

Ex Ante versus Ex Post Conditionality at the IMF 205

ONLINE NOTEBOOK

Data Dissemination via the Internet 206

Searching for a Mission at the World Bank 206

POLICY NOTEBOOK Should National Policymakers Promote Microlending? 207

ON THE WEB 208 Debt Relief for the Heavily Indebted Poor Countries 209

FUNDAMENTAL ISSUES

What Aspects of IMF and World Bank Policymaking Have Proved Controversial in Recent Years? 210

Does the International Financial Architecture Need a Redesign? 210

Crisis Prediction and Early-Warning Systems 210
Rethinking Economic Institutions and Policies 211

Rethinking Long-Term Development Lending 211 Alternative Institutional Structures for Limiting Financial Crises 212

FUNDAMENTAL ISSUES

What Changes in the International Financial Architecture Have Economists Proposed in Recent Years? 214

Chapter Summary 214
Questions and Problems 215
Online Applications 216
Selected References and Further Readings 217

PART 3 EXCHANGE-RATE AND BALANCE-OF-PAYMENTS DETERMINATION 219

CHAPTER 8 Traditional Approaches to Balance-of-Payments and Exchange-Rate Determination 220

Common Characteristics of the Traditional Approaches 221

Exports, Imports, and the Demand for and Supply of Foreign Exchange 221

Derivation of the Demand for Foreign Exchange 221 Elasticity and the Demand for Foreign Exchange 222 Derivation of the Supply of Foreign Exchange 223 Elasticity and the Supply of Foreign Exchange 224

FUNDAMENTAL ISSUES

How Do the Supply of Exports and Demand for Imports Determine the Supply of and Demand for Foreign Exchange? 226

The Elasticities Approach 226

The Exchange Rate and the Balance of Payments 226

The Role of Elasticity 227

ON THE WEB 228

The Marshall-Lerner Condition 228

FUNDAMENTAL ISSUES

What Is the Elasticities Approach to Balance-of-Payments and Exchange-Rate Determination? 229

Short- and Long-Run Elasticity Measures and the J-Curve 229

Short-Run versus Long-Run Time Horizons 229 The J-Curve Effect 230

MANAGEMENT NOTEBOOK

Industry-Level Evidence of J-Curve Effects for Bilateral Trade between Canada and the United States 231

0.0 6.0	FUNDAMENTAL ISSUES
	What Is the J-Curve Effect? 231
	Pass-Through Effects 232
Ø	ON THE WEB 232
	MANAGEMENT NOTEBOOK Market Bower and Variations in U.S. Evahange Bata
	Market Power and Variations in U.S. Exchange-Rate Pass-Through Effects 232
02 0 6 7 0	FUNDAMENTAL ISSUES What Are Pass-Through Effects? 233
The	Absorption Approach 233
	Modeling the Absorption Approach 233
	Absorption 234
	Real Income 234
	The Current Account 234
	Determination of the Current Account Balance 234
	Economic Expansion and Contraction 235
	An Economic Expansion 235
	An Economic Contraction 235
X	ON THE WEB 236
60	FUNDAMENTAL ISSUES
6.0	What Is the Absorption Approach to Balance-of-Payments
	and Exchange-Rate Determination? 236
	Policy Instruments 236
62 (S)	FUNDAMENTAL ISSUES
	How Do Changes in Real Income and Absorption Affect a
	Nation's Current Account Balance and the Foreign Exchange
	Value of Its Currency? 237
	Chapter Summary 238
	Questions and Problems 239

Online Applications 240

Selected References and Further Readings 241

CHAPTER 9 Monetary and Portfolio Approaches to Balance-of-Payments and Exchange-Rate Determination 243

Central Bank Balance Sheets 244
A Nation's Monetary Base 244

POLICY NOTEBOOK

So Many Foreign Exchange Reserves, So Many New Options for Allocating Them 245

A Nation's Money Stock 246

An Open-Market Transaction 246

The Money Multiplier 246

The Relationship between the Monetary Base and the Money Stock 247

FUNDAMENTAL ISSUES

What Are the Main Assets and Liabilities of Central Banks? 248

Managed Exchange Rates: Foreign Exchange Interventions 248

Mechanics of Foreign Exchange Interventions 248

Intervention Transactions 248
Leaning with or against the Wind 249

Financing Interventions 249

☑ ON THE WEB 250

Foreign Exchange Interventions and the Money Stock 250

An Example of a Foreign Exchange Transaction 251

The Effect on the U.S. Money Stock 252

Sterilization of Interventions 252

POLICY NOTEBOOK

Emerging Nations Weigh the Benefits and Costs of Sterilization 254

FUNDAMENTAL ISSUES

How Do a Central Bank's Foreign Exchange Market Interventions Alter the Monetary Base and the Money Stock? 255 The Monetary Approach to Balance-of-Payments and Exchange-Rate Determination 255

The Cambridge Approach to Money Demand 255 Money, the Balance of Payments, and the Exchange Rate 256

The Relationship between the Money Stock and the Balance of Payments 256

The Relationship between Domestic Prices, Foreign Prices, and the Spot Exchange Rate 256

The Monetary Equilibrium Condition 256

The Monetary Approach and a Fixed-Exchange-Rate Arrangement 257

A Change in Domestic Credit 257

A Change in the Quantity of Money Demanded 258

POLICY NOTEBOOK

The Oil-Rich Middle East Begins to Desert the Sinking Dollar 258

The Monetary Approach and a Flexible-Exchange-Rate Arrangement 259

A Change in Domestic Credit 259

A Change in the Quantity of Money Demanded 260

FUNDAMENTAL ISSUES

What Is the Monetary Approach to Balance-of-Payments and Exchange-Rate Determination? 260

Applying the Monetary Approach: A Two-Country Setting 260

A Two-Country Monetary Model 260

An Example of Exchange-Rate Determination for Two Nations 261



FUNDAMENTAL ISSUES

How Is the Monetary Approach a Theory of Exchange-Rate Determination in a Two-Country Setting? 263

The Portfolio Approach to Exchange-Rate Determination		
Households' Allocation of Wealth	263	

A Change in the Domestic Money Stock 264

A Change in the Foreign Interest Rate 264

FUNDAMENTAL ISSUES

What Is the Portfolio Approach to Exchange-Rate Determination? 265

To Sterilize or Not to Sterilize? 265

Sterilized Foreign Exchange Interventions and the Monetary Approach 265

Sterilized Foreign Exchange Interventions and the Portfolio Approach 266

Do Interventions Accomplish Anything? 266

FUNDAMENTAL ISSUES

Should Central Banks Sterilize Foreign Exchange Interventions? 268

Chapter Summary 268

Questions and Problems 269

Online Applications 270

Selected References and Further Readings 271

PART 4 OPEN ECONOMY MACROECONOMICS AND POLICY ANALYSIS 273

CHAPTER 10 An Open Economy Framework 274

Measuring an Economy's Performance: Gross Domestic Product and Price Indexes 275

Gross Domestic Product 275

Nominal GDP, Real GDP, and the GDP

Price Deflator 276

Real versus Nominal GDP 276

The GDP Price Deflator 277

ON THE WEB 277

Denoting a Base Year 277

♠ POLICY NOTEBOOK

Global Real GDP Calculations Reveal the Rapid Pace of World Economic Growth 279

ON THE WEB 279

Fixed- and Flexible-Weight Price Measures

The GDP Price Deflator: A Flexible-Weight Price Index 280 Fixed-Weight Price Indexes

The Consumer and Producer Price Indexes 280

MANAGEMENT NOTEBOOK

The Tenuous Link from Chinese Wages to U.S. Consumer Prices 280

ON THE WEB 281

Real Income and Expenditures: The IS Schedule

The Income Identity 282 The Product Identity 283

FUNDAMENTAL ISSUES

How Do Economists Measure a Nation's Flow of Income and Expenditure and Its Overall Level of Prices of Goods and Services? 284

Private and Public Expenditures 284

Saving, Import Spending, and Domestic Consumption Spending 284

MANAGEMENT NOTEBOOK

The Declining Impact of Interest Rate Variations on U.S. Real Consumption Expenditures

Desired Investment Spending

Government Spending and Net Taxes 290

Export Spending 291

Equilibrium Income and Expenditures 291

Aggregate Desired Expenditures 292

Equilibrium National Income 292	
The Income-Expenditure Equilibrium	293

FUNDAMENTAL ISSUES

How Is Equilibrium Real Income Determined in an Open Economy? 293

The IS Schedule 293

The Derivation of the IS Schedule 294

Determining the Position of the IS Schedule 295

The Multiplier Effect 295

Explaining the Multiplier Effect 297

FUNDAMENTAL ISSUES

What Is the 1S Schedule, and What Factors Determine Its Position? 297

The Market for Real Money Balances: The *LM* Schedule 298
The Demand for Money 298
The Transactions and Precautionary Motives for Holding Money 298

⚠ ONLINE NOTEBOOK

Using the Web to Convert Dollars into African Vouchers 299

The Portfolio Motive for Holding Money 300
The Demand for Real Money Balances 301

The LM Schedule 302

Money Market Equilibrium and the LM Schedule 303
Determining the Position of the LM Schedule 304

FUNDAMENTAL ISSUES

What Is the LM Schedule, and What Factors Determine Its Position? 305

The Balance of Payments: The *BP* Schedule and the *IS–LM–BP* Model 305

Maintaining a Balance-of-Payments Equilibrium: The *BP* Schedule 305

Real Income and the Balance of Payments 305

The Nomin	al Interest Rate and the Balance of
Payments	306

The *IS-LM-BP* Model 307 IS-LM *Equilibrium* 307

FUNDAMENTAL ISSUES

What Is an IS-LM Equilibrium? 307

Determining a Nation's Balance-of-Payments Position 307

FUNDAMENTAL ISSUES

What Is the BP Schedule, and How Can We Use the IS-LM-BP Model to Determine a Nation's Balance-of-Payments
Status? 309

Chapter Summary 309
Questions and Problems 310
Online Applications 311
Selected References and Further Readings 312

CHAPTER 11 Economic Policy with Fixed Exchange Rates 314

The Objectives of Policy 315
Internal Balance Objectives 315
Real-Income Goals 315

ON THE WEB 316

Employment Goals 317
Inflation Goals 318

External Balance Objectives 319
International Objectives and Domestic Goals 31
External Balance for Its Own Sake 319

FUNDAMENTAL ISSUES

What Are the Economic Goals of National Policymakers? 320

The Role of Capital Mobility 320

Capital Mobility and the *BP* Schedule 321

The Case of Low Capital Mobility 321

The Case of High Capital Mobility 322

Perfect Capital Mobility 322

Perfect Capital Mobility and the BP Schedule 322

№ ONLINE NOTEBOOK

A Web Route to Avoiding Lines for Currency Exchange 323

The Domestic Interest Rate and Balance of Payments with Perfect Capital Mobility 323

FUNDAMENTAL ISSUES

How Does the Degree of Capital Mobility Influence the Slope of the BP Schedule? 324

Fixed Exchange Rates and Imperfect Capital Mobility 324

Monetary Policy under Fixed Exchange Rates
and Imperfect Capital Mobility 325

POLICY NOTEBOOK

To Make Its Official Exchange Rate Credible, Venezuela's Government Has Sometimes Effectively Given Away Caribbean Vacations 325

ON THE WEB 325

Monetary Policy, the Nominal Interest Rate, and Real Income 325

Monetary Policy and the Balance of Payments with Imperfect Capital Mobility 327

Sterilized Monetary Policy 327

Nonsterilized Monetary Policy 328

The Monetary Approach Revisited 329

POLICY NOTEBOOK

What Determines the Choice of a Peg for a Nation's Fixed-Exchange-Rate System? 329

FUNDAMENTAL ISSUES

To What Extent Can Monetary Policy Actions Influence the Real Income Level of a Small Open Economy with Imperfect Capital Mobility and a Fixed Exchange Rate? 330

Fiscal Policy under Fixed Exchange Rates 330

Fiscal Policy, the Nominal Interest Rate, and Real Income 330

Fiscal Policy and the Balance of Payments with Imperfect Capital Mobility 331

The Effects of Fiscal Policy Actions with and without Monetary Sterilization 332

FUNDAMENTAL ISSUES

To What Extent Can Fiscal Policy Actions Influence the Real Income Level of a Small Open Economy with Imperfect Capital Mobility and a Fixed Exchange Rate? 334

Fixed Exchange Rates and Perfect Capital Mobility 335

POLICY NOTEBOOK

Brazilian Policymakers Try to Have It Both Ways 335

ON THE WEB 335

Economic Policies with Perfect Capital Mobility and a Fixed Exchange Rate: The Small Open Economy 336

Monetary Policy with Perfect Capital Mobility and a Fixed Exchange Rate 336

Fiscal Policy with Perfect Capital Mobility and a Fixed Exchange Rate 337

FUNDAMENTAL ISSUES

In What Ways Does Perfect Capital Mobility Alter the Relative Effectiveness of Monetary and Fiscal Policy Actions in a Small Open Economy That Adopts a Fixed Exchange Rate? 337

Economic Policies with Perfect Capital Mobility and a Fixed Exchange Rate: A Two-Country Example 338

A Two-Country Model with Perfect Capital Mobility and a Fixed Exchange Rate 338

The Effects of a Foreign Monetary Expansion 339
The Effects of a Foreign Fiscal Expansion 340

The Effects of a Domestic Monetary Expansion 342

The Effects of a Domestic Fiscal Expansion 343

FUNDAMENTAL ISSUES

In a Two-Country Setting in Which One Nation's Central Bank Fixes the Exchange Rate, to What Extent Can Policy Actions in One Nation Influence Economic Activity in the Other Nation? 344

Chapter Summary 344
Questions and Problems 345
Online Applications 346
Selected References and Further Readings 347

CHAPTER 12 Economic Policy with Floating Exchange Rates 348

Floating Exchange Rates and Imperfect Capital Mobility 349
The Effects of Exchange-Rate Variations in the *IS-LM-BP*Model 349

Exchange-Rate Variations and the IS Schedule 349
Exchange-Rate Variations and the BP Schedule 350
Monetary Policy under Floating Exchange Rates 350

POLICY NOTEBOOK

Current Account Balances and Exchange-Rate Adjustments 351

Fiscal Policy under Floating Exchange Rates 353

The Case of Low Capital Mobility 353

The Case of High Capital Mobility 354

🔼 ONLINE NOTEBOOK

Betting That Higher Capital Mobility and Greater Spending Will Fuel an Iraqi Dinar Appreciation 354

FUNDAMENTAL ISSUES

How Do Monetary and Fiscal Policy Actions Affect a Nation's Real Income Under a Floating Exchange Rate? 355

Floating Exchange Rates and Perfect Capital Mobility 355

Economic Policies with Perfect Capital Mobility and a Floating Exchange Rate: The Small Open Economy 355

Monetary Policy with Perfect Capital Mobility and a Floating Exchange Rate 355

Fiscal Policy with Perfect Capital Mobility and a Floating Exchange Rate 356

Perfect Capital Mobility and Fixed versus Floating Exchange Rates 357

FUNDAMENTAL ISSUES

How Does Perfect Capital Mobility Influence the Relative Effectiveness of Monetary and Fiscal Policy Actions in a Small Open Economy That Permits Its Exchange Rate to Float? 358

Economic Policies with Perfect Capital Mobility and a Floating Exchange Rate: A Two-Country Example 358

The Effects of a Domestic Monetary Expansion 358

MANAGEMENT NOTEBOOK

A Beggar-Thy-Neighbor Effect Hits Auto Markets of U.S. Trading Partners 360

The Effects of a Foreign Monetary Expansion 360
The Effects of a Domestic Fiscal Expansion 361
The Effects of a Foreign Fiscal Expansion 362

FUNDAMENTAL ISSUES

In a Two-Country Setting with a Floating Exchange Rate, to What Extent Can Policy Actions in One Nation Influence Economic Activity in the Other Nation? 362

Fixed versus Floating Exchange Rates 363

Efficiency Arguments for Fixed versus Floating Exchange Rates 363

Social Costs Stemming from Foreign Exchange Risks 363 Efficiency via a Fixed Exchange Rate? 364 The Pain of Realigning 364



ON THE WEB 365

FUNDAMENTAL ISSUES

What Is the Basic Economic Efficiency Trade-off Faced in Choosing between Fixed and Floating Exchange Rates? 366

Stability Arguments for Fixed versus Floating Exchange Rates 366

Autonomous Expenditure Volatility and Fixed versus Floating Exchange Rates 366

Financial Volatility and Fixed versus Floating Exchange Rates 368

The Stability Trade-Off 370

Monetary Policy Autonomy and Fixed versus Floating Exchange Rates 371

FUNDAMENTAL ISSUES

How Does the Choice between Fixed and Floating Exchange Rates Depend in Part on the Implications for Economic Stability and Monetary Policy Autonomy? 372

Chapter Summary 372
Questions and Problems 373
Online Applications 374
Selected References and Further Readings 374

CHAPTER 13 The Price Level, Real Output, and Economic Policymaking 376

Aggregate Demand 377

The Aggregate Demand Schedule 377

FUNDAMENTAL ISSUES

What Is the Aggregate Demand Schedule? 378

Factors That Determine the Position of the Aggregate Demand Schedule in an Open Economy 379

Monetary Policy and Aggregate Demand 379

Monetary Policy and Aggregate Demand in an Open Economy with a Fixed Exchange Rate 380

Monetary Policy and Aggregate Demand in an Open Economy with a Floating Exchange Rate 382

Exchange-Rate Policy and Aggregate Demand in an Open Economy 384

FUNDAMENTAL ISSUES

What Factors Determine the Extent to Which Changes in the Quantity of Money Can Influence Aggregate Demand in an Open Economy? 384

Fiscal Policy and Aggregate Demand 384

Fiscal Policy and Aggregate Demand in an Open Economy with a Fixed Exchange Rate 385

Fiscal Policy and Aggregate Demand in an Open Economy with a Floating Exchange Rate 387

FUNDAMENTAL ISSUES

What Factors Determine the Extent to Which Fiscal Policy Actions Can Influence Aggregate Demand in an Open Economy? 389

Aggregate Supply 389

Output and Employment Determination 389

The Production Function 389

The Marginal Product of Labor 390

The Demand for Labor 391

Wage Flexibility, Aggregate Supply, and the Price Level 392

The Determination of Nominal Wages 392

MANAGEMENT NOTEBOOK

In a Globalized Economy, Higher Corporate Income Taxes Translate into Lower Wages for Workers 393

Employment and Aggregate Supply with Fixed versus Flexible Nominal Wages 394

The Aggregate Supply Schedule with Partial Wage Adjustment 396

FUNDAMENTAL ISSUES

What Is the Aggregate Supply Schedule? 397

Real Output, the Price Level, and Economic Policymaking 397

The Equilibrium Price Level and the Equilibrium Real Output Level 398

The Output and Price-Level Effects of Economic Policies with Floating versus Fixed Exchange Rates 399

Aggregate Demand, Output, and Inflation 399 Economic Policies, Output, and Inflation with Floating versus Fixed Exchange Rates 400

POLICY NOTEBOOK

Are Nations' Business Cycles More Nearly Synchronized Than in Years Past? 400

FUNDAMENTAL ISSUES

How Are a Nation's Price Level and Volume of Real Output Determined, and How Might Economic Policymakers Influence Inflation and Real Output? 402

Rules versus Discretion in Economic Policymaking 402

Expectations and the Flexibility of Nominal Wages 402

The Rational Expectations Hypothesis 402

Wages, Employment, and Output When Policy Actions Are Anticipated 402

Wages, Employment, and Output When Policy Actions Are Unanticipated 404

Discretion, Credibility, and Inflation 404

The Inflation Bias of Discretionary Economic Policymaking 404

The Incentive to Inflate 406

Workers' Response 406

The Problem of Policy Credibility 407

POLICY NOTEBOOK

When Measured Inflation Expectations Creep Upward, So Does the Apparent Inflation Bias of Discretionary Policymaking 408

Making Economic Policies Credible 408



ON THE WEB 410

Support for Central Bank Independence 410

FUNDAMENTAL ISSUES

Why Does the Rational Expectations Hypothesis Indicate That Economic Policies May Have Limited Real Output Effects and That the Credibility of Policymakers Is Important? 411

Chapter Summary 412
Questions and Problems 413
Online Applications 414
Selected References and Further Readings 415

PART 5 DOMESTIC AND MULTINATIONAL POLICYMAKING IN A GLOBAL ECONOMY 417

CHAPTER 14 Domestic Economic Policymaking in a Global Economy 418

The Policy Assignment Problem 419

Finding the Best Policy Mix for Internal and External Balance 419

Achieving External Balance 420

Achieving Internal Balance 421

Assigning Internal and External Objectives 421

An Incorrect Assignment 422

Difficulties in Solving the Assignment Problem 423

FUNDAMENTAL ISSUES

What Is the Policy Assignment Problem? 423

Exchange-Rate Responses to Policy Actions with Sticky Wages and Prices—Exchange-Rate Overshooting 423

The Long-Run Adjustment of the Exchange Rate to a Monetary Expansion 424

Long-Run Equilibrium 424

Exchange-Rate Adjustment in the Long Run 424

Exchange-Rate Overshooting 425

Moving from the Short Run to the Long Run 425

Tracing the Adjustment of the Exchange Rate 425

Implications of Exchange-Rate Overshooting 427

FUNDAMENTAL ISSUES

What Is Exchange-Rate Overshooting, and Why Might It Occur? 427

Openness and the Output-Inflation Relationship—How Globalization Alters the Effects of Policies 427

How Increased Openness Can Make Output Less Responsive to Inflation 428

POLICY NOTEBOOK

Measuring Openness 429

Partially Indexed Wage Contracts 430

Greater Openness and Imported Inputs 430

How Greater Openness Can Increase the Sensitivity of Output to Inflation 430

Openness and Competition in Domestic Product Markets 430

MANAGEMENT NOTEBOOK

Which Nations' Industries Face the Most Extensive Regulations? 431

Openness, Wage Stickiness, and Central Bank Independence 432

Evidence on Openness and the Output–Inflation Relationship 433

Responsiveness of Output to Inflation: International Evidence 433

Central Bank Independence, Openness, and the Output-Inflation Relationship 434

Additional Evidence Regarding the Interaction between Openness and the Output-Inflation Relationship 435

FUNDAMENTAL ISSUES

Why Does Increased Openness of a Nation's Economy Have an Uncertain Net Effect on the Responsiveness of Output to Changes in the Price Level? 435

Openness and Inflation 436

The Global Openness–Inflation Relationship 436

POLICY NOTEBOOK

Is a More Open Economy More or Less Prone to "Sudden Stops"? 437

Just How Strong Is the Openness–Inflation Relationship? 437

Differences in How Openness and Inflation Relate in Developed versus Less Developed Nations 437 Accounting for Cross-Country Differences in the Impacts of Globalization 439

FUNDAMENTAL ISSUES

Is There an Inverse Relationship between Openness and Inflation? 439

New Open Economy Macroeconomics and Its Policy Implications 439

Features of the New Open Economy Macroeconomics 440

Sources of Price Stickiness 440

MANAGEMENT NOTEBOOK

Are Product Prices Really Sticky? 440

Imperfect Competition 441
Dynamic Analysis 442

Policy Implications of the New Open Economy Macroeconomics 442

Welfare Evaluations 442
Still a Long Way to Go 443

FUNDAMENTAL ISSUES

What Is the New Open Economy Macroeconomics? 443

Chapter Summary 444
Questions and Problems 445
Online Applications 446
Selected References and Further Readings 447

CHAPTER 15 Policy Coordination, Monetary Union, and Target Zones 448

International Interdependence 449
Structural Interdependence and International Policy
Externalities 449

Structural Interdependence and Its Consequences 449
International Policy Externalities 449

Accounting for Interdependence: International Policy Cooperation and Coordination 450

International Policy Cooperation 450
International Policy Coordination 450

FUNDAMENTAL ISSUES

What Is Structural Interdependence, and How Can It Lead Nations to Cooperate or to Coordinate Their Policies? 451

Perfect Capital Mobility Revisited: Can International Policy Coordination Pay? 451

The Aggregate Demand Effects of National Monetary Policies 451

Conflicting Monetary Policies and the Potential Role of Policy Coordination 453

A Potential Gain from Policy Coordination 454

The Pros and Cons of International Policy Coordination 455

Potential Benefits of International Policy Coordination 456

Internalizing International Policy Externalities 456
Getting the Most Out of Limited Sets of Policy
Instruments 456

Gaining Support from Abroad 456

FUNDAMENTAL ISSUES

What Are the Potential Benefits of International Policy Coordination? 457

Some Potential Drawbacks of International Policy Coordination 457

How Much Autonomy Should a Nation Sacrifice? 457
Can Other Countries Be Trusted? 457
Putting Faith in Other Nations' Policymakers 458
Could "Successful" Coordination Actually Be
Counterproductive? 459

FUNDAMENTAL ISSUES What Are the Potential Drawbacks of International Policy Coordination? 462

The Economics of Monetary Unions 462

Optimal Currency Areas 462

How Separate Currencies and a Floating Exchange Rate Can Be Beneficial 463

A Shift in Relative Demands 463

A Flexible Exchange Rate 464

When Could Using a Single Currency Pay Off? 464

POLICY NOTEBOOK

Will North Americans Eventually Use the "Amero" as a Medium of Exchange? 465

Rationales for Separate Currencies 465

Removal of Currency Competition 465

Lack of Fiscal Integration 466

Trials and Tribulations of the European Monetary Union 467

ON THE WEB 467

Does the Eurozone Constitute an Optimal Currency Area? 467

POLICY NOTEBOOK

Pros and Cons of an East Asian Monetary Union 468
Fiscal Crisis and the Euro 468

POLICY NOTEBOOK

When Have Past Currency Unions Collapsed? 470

FUNDAMENTAL ISSUES

Could Nations Gain from Adopting a Common Currency? 470

Vehicle Currencies 470

POLICY NOTEBOOK

Determination of Invoicing Currencies in International Trade 471

The Dollar's Predominance 471	
Evidence Regarding Today's Vehicle Currencies	471

FUNDAMENTAL ISSUES What Are Vehicle Currencies? 47

Splitting the Difference: Exchange-Rate Target Zones 473
Target Zones 473

Establishing a Target Zone 473
The Behavior of the Exchange Rate Inside the Target
Zone 474

Does the Target Zone Model Fit the Facts? 476

Real-World Evidence 476

Salvaging the Target Zone Theory 476

FUNDAMENTAL ISSUES

What Is an Exchange-Rate Target Zone? 477

Chapter Summary 477
Questions and Problems 479
Online Applications 480
Selected References and Further Readings 480

GLOSSARY 483

INDEX 493