

Contents

Prefacexiii
Acknowledgmentsxv
Contributorsxvii
Acronymsxix
Chapter 1	
An Introduction to Fiscal Sustainability in Theory and Practice	1
<i>Craig Burnside</i>	
1 Themes	1
2 Omissions	2
3 Basic Theory and Tools	3
4 Business Cycles and Fiscal Rules	5
5 Crises and Fiscal Sustainability	6
6 Application of These Tools	8
Notes	8
References	9

Chapter 2
Theoretical Prerequisites for
Fiscal Sustainability Analysis11

Craig Burnside

1 The Government Budget Constraint12

2 Fiscal and Monetary Policy and the Effects of Government Deficits . . .15

 Price Level Determination16

 Coordination of Fiscal and Monetary Policy20

3 The Fiscal Theory of the Price Level24

 Interpreting the Lifetime Budget Constraint24

 Relevance of the Fiscal Theory27

 The Fiscal Theory and Policy Messages28

4 Uncertainty28

5 Conclusion30

Notes30

References32

Chapter 3
Some Tools for Fiscal Sustainability Analysis35

Craig Burnside

1 The Long-Run Fiscal Sustainability Condition36

 An Example38

2 Achieving a Target Debt Level41

 A Modified Example41

3 Formal Statistical Tests43

4 Debt Dynamics47

 Theoretical Background47

 Debt Dynamics in Practice54

 Some Examples of Debt Dynamics55

5 Using Debt Dynamics in Forward-Looking Analysis62

 Time-Varying Interest Rates63

 Exchange Rate Risk64

6 Measuring Debt67

 Relevance of Debt and Interest Measures73

7 Conclusion74

Notes75

References77

Chapter 4

Debt and Debt Indicators in the Measurement of Vulnerability81

Punam Chuhan

1	Definition and Measurement of Debt	81
	Debt in a Closed Economy	82
	Debt in an Open Economy	83
	Definition of Debt	85
	Measurement of Debt	86
2	Debt Analysis and Standard Indicators of Indebtedness	88
	Debt Payment Problems: Liquidity and Solvency	88
3	Assessing Debt Sustainability	98
	Definition of Debt Sustainability	99
	The Core Elements of Traditional Debt Sustainability Analysis	100
4	Conclusion	103
5	Annex	104
	Notes	107
	References	109

Chapter 5

Cyclical Adjustment of the Budget Surplus:

Concepts and Measurement Issues113

Craig Burnside and Yuliya Meshcheryakova

1	Identifying Trends and Cycles in Aggregate Economic Activity	114
	Potential Output	115
	Linear Trends	116
	Trends and Cycles as Defined by the Hodrick-Prescott Filter	116
	Cycles and Trends as Defined by an Approximate Band-Pass Filter	117
	Beveridge-Nelson Decomposition	118
	Peak-to-Peak Trend Lines	119
2	Methods for Computing the Cyclically Adjusted Budget Surplus	119
	The EU Definition of the Cyclical Component of the Budget	121
	The BEA Method of Cyclical Adjustment	122
	The IMF and OECD Methods of Cyclical Adjustment	123
3	Usefulness of the Adjusted Surplus Concept	124
4	Conclusion	128
	Notes	128
	References	129

Chapter 6
Mexico: A Case Study of Procyclical Fiscal Policy133

Craig Burnside and Yuliya Meshcheryakova

1 Perspectives on Mexico's Fiscal Accounts, 1980–2003	135
The Business Cycle in Mexico	135
Trends and Cycles in Mexico's Fiscal Accounts	142
2 Constructing the Cyclically Adjusted Budget Surplus in Mexico	152
3 Characterizing Fiscal Policy	160
4 The Impact of Fiscal Policy on Real Activity	163
A Small VAR Model of the Mexican Economy	164
The Effect of Fiscal Policy on Real Activity	166
5 Conclusion	171
Notes	172
References	172
Data Sources	174

Chapter 7
Chile's Fiscal Rule175

Norbert Fiess

1 Fiscal Rules and the Concept of the Structural Balance	177
Fiscal Rules	177
The Structural Balance	179
2 The Chilean Experience	181
Chile's Fiscal Rule	181
Some Observations on Chile's Fiscal Rule	185
Countercyclicality of the Structural Rule	189
3 Self-Insurance and Self-Protection at the Country Level	191
Sustainable Debt Management and Reduction of	
Contagion Risk	192
Public and Social Expenditure Smoothing	192
4 Conclusion	195
5 Annex	197
Notes	200
References	201

Chapter 8
Currency Crises and Fiscal Sustainability205

Craig Burnside, Martin Eichenbaum, and Sergio Rebelo

1	The Government's Intertemporal Budget Constraint	207
2	Fiscal Sustainability and Speculative Attacks	209
	Money Demand	210
	The Rule for Abandoning the Fixed Exchange Rate	211
	Post-crisis Monetary Policy	212
	Determining the Timing of the Crisis	213
3	Ongoing Deficits	215
	A Numerical Example	218
4	Prospective Deficits	220
5	Conclusion	224
6	Technical Annex	225
	The Timing of the Crisis	225
	Ongoing Deficits	226
	Prospective Deficits	229
	Notes	230
	References	231

Chapter 9
Financing the Costs of Currency Crises233

Craig Burnside, Martin Eichenbaum, and Sergio Rebelo

1	Prices and Currency Crises	235
2	The Government Budget Constraint	239
3	A Benchmark Model	244
	A Crisis in the Benchmark Model	245
	A Numerical Example	245
4	Model Extensions	246
	Government Debt in Units of Local Currency	247
	Implicit Fiscal Reform	248
	Deviations from Purchasing Power Parity: Nontradable Goods with Sticky Prices	249
	Deviations from Purchasing Power Parity: Distribution Costs	250

Contents

5	Tax Revenues and Currency Crises	251
6	Case Studies of Mexico, Korea, and Turkey	252
	Mexico 1994	253
	Korea 1997	255
	Turkey 2001	257
7	Governmental Benefits of Crises	258
8	Conclusion	263
9	Annex: Solving the Model	264
	The Baseline Model	264
	The Extended Model with Nominal Debt	264
	The Extended Model with Nominal Transfers	265
	The Extended Model with Sticky Nontradables Prices	265
	Notes	268
	References	269
	Index	271

Boxes

4.1:	Debt Instruments85
7.1:	A Structural Balance for Argentina—Sensitivity to Methodology ..	188

Figures

2.1:	Seigniorage as a Function of the Money Growth Rate	19
6.1:	Real GDP in Mexico, 1980–2003	136
6.2:	Seasonally Adjusted Real GDP in Mexico, 1980–2003	136
6.3:	Trends in Real GDP, 1980–2003	138
6.4:	Deviations from Trend in Real GDP, 1980–2003	139
6.5:	Public Sector Revenue in Mexico, 1980–2003	144
6.6:	Cyclical Components of Public Sector Revenue, 1980–2003	145
6.7:	Public Sector Expenditure in Mexico, 1980–2003	150
6.8:	Cyclical Components of Public Sector Expenditure, 1980–2003 ..	151
6.9:	Cyclical Components of Oil-Based Revenue in Mexico, 1980–2003	155
6.10:	Measures of the Cyclically Adjusted Budget Balance in Mexico, 1980–2003	159
6.11:	The Discretionary Balance and the Fiscal Impulse, 1980–2003	162
6.12:	Impulse Response Functions	167

6.13: Deviations of Output from Trend, and the Estimated Component Due to Fiscal Shocks, 1981–2003	170
7.1: Actual, Adjusted, and Structural Balance and Total Cyclical Budget Components, 1987–2002	184
7.2: Decomposition of Total Cyclical Component, 1987–2000	185
7.3: Copper Price, 1900–2000	186
7B.1: Argentina: Potential and Actual GDP, 1979 Q4–2001 Q4	188
7B.2: Argentina: Structural Economic Balance, 1995–2001	188
7.4: Output Gap, 1986–2000	189
7.5: Deficit and Surplus Bias	190
7.6: Cyclical Components of GDP and Total Expenditure, 1989–2001	194
7.7: Cyclical Components of GDP and Social Expenditure, 1989–2001	195
A7.1: Cyclical Components of GDP and Housing Expenditure	197
A7.2: Cyclical Components of GDP and Social Security Expenditure	198
A7.3: Cyclical Components of GDP and Education Expenditure	198
A7.4: Cyclical Components of GDP and Expenditure on Subsidies	199
A7.5: Cyclical Components of GDP and Other Social Expenditure	199
8.1: Equilibrium Paths for Crisis Models	219
9.1: Price Indices in Mexico, 1993–2000	236
9.2: Price Indices in Korea, 1996–2000	236

Tables

3.1: Size of the Primary Surplus Needed for Bulgaria to Achieve a 60 Percent Debt Target between 2001 and 2005	42
3.2: The Stock of Public Debt in Turkey, 1994–2002	55
3.3: Public Debt Dynamics in Turkey, 1995–2002	57
3.4: The Stock of Public Debt in Argentina, 1993–2002	60
3.5: Public Debt Dynamics in Argentina, 1994–2002	60
3.6: Bulgaria's Debt Dynamics with Time-Varying Interest Rates, 2001–7	64
3.7: Bulgaria's Debt Dynamics with Exchange Rate Risk, 2001–7	66
4.1: Core Principles in the Measurement of Debt	87
4.2: Significant Macroeconomic Correlates of Repayment Crises in Developing Countries	91

4.3: Performance of Selected Economic Indicators in 17 Empirical Studies of Currency Crises	92
4.4: Overview of Debt Indicators	97
A4.1: Sovereign Defaults on Debt to Private Creditors, Rated Issuers, 1975–2002	104
A4.2: Sovereign Defaults on Debt to Private Creditors, Unrated Issuers, 1975–2002	105
6.1: Estimates of a Piecewise Linear Trend in the Logarithm of Seasonally Adjusted Real GDP, 1980 Q1–2003 Q2	138
6.2: Correlations among Various Measures of the Cyclical Component of GDP, 1980 Q1–2003 Q2	140
6.3: Summary Budget Figures, 1980–2002	142
6.4: Components of Public Sector Revenue and Expenditure, 1980–2002	143
6.5: Cyclical Properties of Public Sector Revenue and Expenditure, 1980 Q1–2003 Q2	146
6.6: Estimates of Revenue and Expenditure Elasticities	153
6.7: Variance Decomposition of Output	169
7.1: Chile's Fiscal Rule within the Ehrlich-Becker Insurance Framework	191
8.1: Fiscal Surplus, 1995–9	209
8.2: Parameters for the Numerical Examples	218
8.3: Changes in Banking Sector Stock Market Values	223
8.4: Estimated Nonperforming Loans, June 1997	224
8.5: Costs of Restructuring and Recapitalizing the Banking System ...	224
9.1: Rates of Change for Prices and Exchange Rate in the First Year after the Devaluation	235
9.2: Distribution Margins by Expenditure Category	237
9.3: Results for Numerical Examples	246
9.4: Rates of Growth of Real GDP in the First Year after a Crisis	251
9.5: Pre- and Post-crisis Data for Mexico	254
9.6: Pre- and Post-crisis Data for Korea	255
9.7: Pre- and Post-crisis Data for Turkey	257