

Contents

Preface	ix
List of Figures	xvii
List of Tables	xix
1 Introduction and Overview	1
1.1 History vs. Theory	1
1.2 Outline of the Book	7
I Theoretical and Empirical Foundations	11
2 Financial Crises and Financial Instability: Definitions and Principles	13
2.1 A General Definition of Financial Crises	13
2.2 Asset Price Fluctuations and Aggregate Economic Activity	15
2.2.1 Determinants of Asset Prices	17
2.2.2 Asset Prices and Financial Constraints	19
2.2.2.1 Perfect Capital Market Theory	19
2.2.2.2 Imperfect Capital Market Theory	20
2.2.2.3 A Comparison with Real World Financial Constraints	23
2.2.3 Asset Prices and Aggregate Demand	25
2.2.4 Asset Prices, Liquidity, Solvency and the Emergence of Cumulative Processes	27
2.2.4.1 Liquidity, Solvency, and Profits: Definitions and Interdependencies	27
2.2.4.2 Determinants of Bankruptcy	31
2.2.4.3 Cumulative Expansions and Contractions	33
2.3 Determinants of Financial Instability	39
2.3.1 A General Definition of Financial Instability	39
2.3.2 Cash Flow Positions and Present Values	40
2.3.2.1 Hedge, Speculative and Ponzi-Finance	40
2.3.2.2 Financial Instability in Closed Economies	46
2.3.2.3 Foreign Hedge, Foreign Speculative, and Foreign Ponzi Finance	48
2.3.2.4 Financial Instability in Open Economies	51
2.3.3 Adequacy of Refinancing Possibilities	54
2.3.4 Excess Volatility in Asset Prices	56
2.3.5 Monetary Instability and Debt Deflation	64
2.4 Exogenous and Endogenous Financial Crises	67

3	Stylized Facts and Standard Theory of Financial Crises	71
3.1	Defining and Identifying Financial Crises	71
3.1.1	Currency Crises	71
3.1.2	Banking Crises	73
3.1.3	Twin Crises	74
3.2	Frequency and Severity of Financial Crises	74
3.2.1	Incidence of Financial Crises	75
3.2.2	Duration and Costs of Financial Crises	77
3.3	Business Cycles, Financial Liberalization, and Financial Crises	80
3.3.1	Basic Links	80
3.3.2	Financial Liberalization in the Post Bretton Woods Era	82
3.4	Stylized Behaviour of Macroeconomic Variables During Episodes of Financial Crises	87
3.4.1	Financial Market Variables	89
3.4.1.1	Monetary Aggregates and Foreign Exchange Reserves	89
3.4.1.2	Deposits and Domestic Credit	90
3.4.1.3	Interest Rates	90
3.4.1.4	Equity and Real Estate Prices	91
3.4.2	Current Account Variables	91
3.4.3	Capital Account Variables	92
3.4.4	Real Sector Variables	93
3.4.5	Balance Sheet Variables	94
3.4.5.1	Liquidity and Profit Variables	94
3.4.5.2	Market Valuation and Solvency Variables	95
3.4.6	An Assessment	96
3.5	Standard Theory of Financial Crises and its Correspondence with the Stylized Facts	98
3.5.1	Inconsistent Macroeconomic Policy Models	99
3.5.2	Self-Fulfilling Expectations Models	100
3.5.3	Asymmetric Information Models	101
3.5.4	Credit Constraint and Balance Sheet Models	102
3.5.5	Endogenous Financial Crisis Models	104
3.5.6	An Assessment	104

II A Cyclical Theory of Financial Crises **111**

4	A Model of Financial Crises and Endogenous Fluctuations in Industrial Countries	113
4.1	The Real Side	113
4.2	The Financial Side	115
4.2.1	A Stylized Financial Structure	115
4.2.2	Financial Market Equilibria	118
4.3	Short-Run Comparative-Static Analysis	127
4.3.1	General Results	127
4.3.2	A Comparative-Static View of Financial Crises	133

4.4	Long-Run Dynamic Analysis	139
4.4.1	Finance, Investment and Long-Run Profit Expectations	139
4.4.2	The Local Dynamics of the System	149
4.4.3	Phase Diagram Analysis	152
4.4.4	The Global Dynamics of the System	159
4.4.5	A Dynamic View of Financial Crises and Macroeconomic Fluctuations	168
4.4.5.1	The Emergence of Endogenous Long-Run Equilibrium Business Cycles	169
4.4.5.2	The Emergence of Financial Crises	173
4.4.6	A Keynesian Perspective on Global Dynamics	176
4.5	A Comparison with Standard Theory of Financial Crises	179
4.5.1	Inconsistent Macroeconomic Policy Models	180
4.5.2	Self-Fulfilling Expectations Models	183
4.5.3	Asymmetric Information Models	186
4.5.4	Credit Constraint and Balance Sheet Models	189
4.5.5	Endogenous Financial Crisis Models	192
4.5.6	An Assessment	194
4.6	A Comparison with Standard Business Cycle Theory	198
4.6.1	Theories of Endogenous Business Cycles	199
4.6.2	Theories of Exogenous Shock-Driven Business Cycles	202
4.6.3	An Assessment	204
4.7	Mathematical Supplements	207
5	A Model of Financial Crises and Endogenous Fluctuations in Emerging Market Countries	213
5.1	The Real Side	214
5.2	The Financial Side	217
5.2.1	A Stylized Financial Structure	217
5.2.2	Financial Market Equilibria	220
5.3	Short-Run Comparative-Static Analysis	223
5.3.1	General Results	223
5.3.2	A Comparative-Static View of Financial Crises	228
5.4	Long-Run Dynamic Analysis	235
5.4.1	Finance, Investment and Long-Run Profit Expectations	235
5.4.2	The Local Dynamics of the System	240
5.4.3	Phase Diagram Analysis	243
5.4.4	The Global Dynamics of the System	249
5.4.5	A Dynamic View of Financial Crises and Macroeconomic Fluctuations	254
5.4.5.1	The Emergence of Endogenous Long-Run Equilibrium Business Cycles	255
5.4.5.2	Domestic Financial Crisis without Currency Crisis	259
5.4.5.3	The Occurrence of a Twin Crisis	262
5.4.6	A Keynesian Perspective on Global Dynamics	266

5.5	A Comparison with Standard Theory of Financial Crises	269
5.5.1	Inconsistent Macroeconomic Policy Models	270
5.5.2	Self-Fulfilling Expectations Models	272
5.5.3	Asymmetric Information Models	277
5.5.4	Credit Constraint and Balance Sheet Models	282
5.5.5	Endogenous Financial Crisis Models	284
5.5.6	An Assessment	286
5.6	A Comparison with Standard Business Cycle Theory	286
5.7	Mathematical Supplements	287
6	A Calibration Model of Financial Crises in Emerging Markets	295
6.1	The Nature of Calibration Models	295
6.1.1	Solution Procedures to Dynamic General Function Models, Lim- itations, and Simulation Methods	295
6.1.2	Simulation of Financial Crises with Calibration Techniques	297
6.2	The Real Side	301
6.3	The Financial Side	303
6.3.1	A Stylized Financial Structure	303
6.3.2	Financial Market Equilibria	307
6.4	The Balance of Payments	313
6.5	Monetary and Exchange Rate Policy	314
6.6	Analytical Solution of the Model	317
6.7	Simulation Classifications and Assumptions	318
6.7.1	Financial Crises as a Cyclical Phenomenon	318
6.7.2	Financial Crises as an Adverse Exogenous Shock Phenomenon	321
6.8	Sensitivity Analysis and Method of Graphical Representation	322
6.9	Simulation of Financial Crises as a Cyclical Phenomenon	324
6.9.1	The Boom Phase	324
6.9.2	The Overborrowing Phase and the Upper Turning Point	327
6.9.3	The Bust Phase	331
6.10	Simulation of Financial Crises Caused by an Adverse Foreign Interest Rate Shock	335
7	Conclusion	353
7.1	New Perspectives for Economic Theory	353
7.2	Policy Recommendations	355
A	Tobin's q-Theory of Investment	361
B	Financial Constraints in Perfect Capital Markets	365
C	An Example of Off-Balance Sheet Transactions	369
D	Forward vs. Backward Looking Variables and Solutions of General Dynamic Rational Expectations Models	373
D.1	Forward and Backward Solutions of Linear Differential Equations	373
D.2	The Leibnitz Rule: Differentiating a Definite Integral	375
D.3	Backward and Forward Looking Variables	376

D.4	Forward Looking Variables, Rational Expectations and Dynamic Stability	379
D.5	Solutions to General Dynamic Rational Expectations Models	383
E	Kalecki's Theory of Profits	385
	Symbol Glossary	389
	Bibliography	393