

# European Currency Crises and After

Christian Bordes, Eric Girardin  
and Jacques Mélitz *editors*

**Manchester University Press**  
Manchester and New York

*Distributed exclusively in the USA and Canada by St. Martin's Press*

## Contents

List of Figures

List of Tables

Contributors

Preface

<b>1: Introduction</b>	<b>1</b>
<i>Christian Bordes, Eric Girardin and Jacques Mélitz</i>	
<b>2: Monetary policies in the EMS</b>	<b>8</b>
<i>Paul De Grauwe</i>	
1 Introduction	8
2 The stance of monetary policy in the EMS during the recession : a descriptive analysis	8
3 The stance of monetary policy in the EMS during the recession : an evaluation	14
4 The EMS during the 1990s	16
5 Conclusion	22
<b>Discussion</b>	<b>25</b>
<i>Jacques Mélitz</i>	
<b>3: The 1992-93 EMS crisis : assessing the macroeconomic costs</b>	<b>28</b>
<i>Lorenzo Bini-Smaghi and Oreste Tristani</i>	
1 Introduction	28
2 Methodology	29
3 Main results	33
4 Extensions	35
5 Concluding remarks	43
Appendix 3: The structure of GEM	46
<b>Discussion</b>	<b>52</b>
<i>Jean Pisani-Ferry</i>	
<b>4: Currency crisis models : Bridging the gap between old and new approaches</b>	<b>57</b>
<i>Alan Sutherland</i>	
1 Introduction	57
2 A deterministic model of balance of payments crises	58

3	Stochastic shocks	60
4	A digression into continuous time	63
5	Change in domestic credit policy at the collapse time	64
6	An optimizing policy-maker	66
7	An alternative model	74
8	Conclusion	78
	<b>Discussion</b>	<b>82</b>
	<i>Jean-Sébastien Pentecôte and Marc-Alexandre SÉNÉgas</i>	
<b>5:</b>	<b>Choosing a target zone : rules versus discretion</b>	<b>89</b>
	<i>Marcus Miller and Lei Zang</i>	
1	Introduction	89
2	Discretion : finding the optimal, discretionary target zone	90
3	The gains from precommitment	96
4	Conclusion	99
	Appendix 5A : The "inverse optimal" problem	101
	Appendix 5B : On evaluating a narrow ERM band	101
	<b>Discussion</b>	<b>103</b>
	<i>Jean-Pierre Laffargue</i>	
<b>6:</b>	<b>On the nature of commitment in flexible target zones and the measurement of credibility : the 1993 ERM crisis</b>	<b>106</b>
	<i>Renzo Avezani, Giampiero M. Gallo and Mark Salmon</i>	
1	Introduction	106
2	The AGS flexible target zone model	110
3	Alternative measures of credibility and the crisis in the ERM in 1993	117
4	Conclusion	127
	<b>Discussion</b>	<b>130</b>
	<i>Daniel Laskar</i>	
<b>7:</b>	<b>Modelling credibility : an application to the United Kingdom</b>	<b>134</b>
	<i>Paul Masson</i>	
1	Introduction	134
2	The circumstances of the UK's brief membership in the ERM	136

3	A model of credibility	139
4	Implications of the model	143
5	Conclusions and directions for future research	148
	Appendix 7 : Derivation of dynamics	150
	<b>Discussion</b>	<b>152</b>
	<i>Benoît Cœuré</i>	
<b>8:</b>	<b>Exchange rate risk under a Peso problem : the case of the peseta in the ERM</b>	<b>157</b>
	<i>Juan Ayuso, Maria Pérez-Jurado and Fernando Restoy</i>	
1	Introduction	157
2	Exchange rate risk under imperfect credibility	159
3	The exchange rate risk of the Spanish peseta	163
4	Conclusion	171
	<b>Discussion</b>	<b>175</b>
	<i>Eric Girardin</i>	
<b>9:</b>	<b>The effects of misalignment on Desired Equilibrium Exchange Rates : some analytical and applied results</b>	<b>179</b>
	<i>Michael Artis and Mark Taylor</i>	
1	Introduction	179
2	Debt accumulation and misalignment	182
3	Catching a moving bus : the dynamics of adjustment	188
4	How important has hysteresis been?	191
5	Conclusions	195
	<b>Discussion</b>	<b>199</b>
	<i>Agnès Bénassy</i>	
<b>10:</b>	<b>Exchange rates and the effectiveness of central bank intervention : new evidence for the G-3 and the EMS</b>	<b>202</b>
	<i>Axel Weber</i>	
1	Introduction	202
2	G-3 intervention and exchange rate management	203
3	EMS intervention and exchange rate management	214
4	Summary and policy conclusions with respect to the future of EMU	216
5	Time series and data sources	218

<b>Appendix 10 : Figures and tables</b>	<b>219</b>
<b>Discussion</b>	<b>235</b>
<i>Christian Bordes</i>	
<b>11: Exchange rate stability and European construction</b>	<b>243</b>
<i>André Icard</i>	
1 Introduction	243
2 Exchange rate stability is a prerequisite for European construction	244
3 Exchange rate stability in Europe after the widening of the ERM bands	246
<b>Index of names</b>	<b>250</b>

## List of figures

2.1	Real short-term interest rates and growth rate of GDP in the EMS-countries	10
2.2	Growth rate of M1 and real growth of GDP in EMS-countries	11
2.3	Real GDP and difference of short and long term interest rates	11
2.4	Real short-term interest rate and real GDP	12
2.5	Real M1 and real GDP : United States	13
2.6	Real GDP and difference of short-term and long-term interest rates : United States	13
2.7	Nominal M1 growth : deviation from 5% growth benchmark : EMS (7)	15
2.8	Nominal M1 growth : deviation from 5% growth benchmark : Germany	15
2.9	Money market equilibrium in a two-country model	18
2.10	Asymmetric output shock	19
2.11	Real growth of GDP : Germany, France, United Kingdom	20
2.12	Inflation in Germany and the EMS	20
3.1	French franc - Deutsche mark interest differentials and exchange rate	31
3.2	Belgian franc - Deutsche mark interest differentials and exchange rate	32
3.3	Italian lira - Deutsche mark interest differentials and exchange rate	39
3.4	Deutsche mark - US dollar exchange rate	42
4.1	The shadow rate and the critical level of domestic credit	62
4.2	Optimal regime switching	70
5.1	The value function and optimal target zone	94
5.2	Why a narrow band needs precommitment	98
6.1	Relative credibility	114
6.2	Deviations from central parity	118
6.3	Svensson's simple measure of credibility	122
6.4	Observed and consistent deviations from central parity	124
6.5	Relative credibility	125

6.6	Cumulated political cost	126
7.1	United Kingdom : Unemployment rate and long-term interest differential vs. Germany, October 1990-August 1992	138
7.2	United Kingdom : Measures of credibility, October 1990 - August 1992	142
7.3	Probability of devaluation with different degrees of credibility	146
8.1	Exchange rate Peseta/DM	164
8.2	Expected rate of the Peseta/DM exchange rate jump	168
8.3	Conditional variance Peseta/DM	169
8.4	Conditional variance Peseta/DM ( $\phi = .97$ )	170
9.1	Internal and external balance	183
9.2	Hysteresis effects	185
9.3	The phase portrait for given initial misalignment	190
9.4	Illustrative DEER trajectories for the G5	193
10.1	Bundesbank and Fed interventions	219
10.2	Bundesbank and Fed intervention coordination, 1985-1992	220
10.3	Coordinated daily central bank intervention and the U.S. \$/DM exchange rate, second sub-sample (01/01/1985 - 31/12/1991)	221
10.4	U.S. \$/DM exchange rate and Bundesbank's and Fed's interventions	222
10.5	The relationship between Bundesbank interventions and exchange rates, interest differentials and the forward premia/discounts, 1977-1992	223
10.6	The relationship between Bundesbank and Fed interventions and U.S. \$/DM exchange rates	224
10.7	Monthly sums of daily interventions and monthly changes in the net foreign assets of the Federal Reserve and the Bundesbank	225
10.8	The relationship between changes in the net foreign assets and the domestic credit component of the monetary base	226
10.9	Long-run ineffectiveness of the Bundesbank's \$/DM interventions	227
10.10	Long-run sterilization of Bundesbank interventions	228

## List of tables

3.1	Exercice 1 : "No-crisis scenario" with 1994 model	34
3.2	Exercice 2 : "Crisis scenario" with 1992 model	37
3.3	Exercice 3 : "No-crisis scenario" with stable lira/DM exchange rate	40
3.4	Exercice 4 : "No-crisis scenario" with stable DM/dollar exchange rate	44
3.5	France: Interest rates	54
3.6	Relative export performance	55
8.1	GARCH estimates : Peseta/DM	166
9.1	Percentage deviation of illustrative G5-DEER	194
10.1	The long-run ineffectiveness of foreign exchange interventions in G-3 countries, two subperiods (1973:1 - 1984:12, 1985:1 - 1992:12)	229
10.2	The long-run sterilization of foreign exchange interventions in G-3 countries, overall period (1973:1 - 1992:12) and two sub-periods (1973:1 - 1984:12, 1985:1 - 1992:12)	230
10.3	The long-run ineffectiveness of foreign exchange intervention policies in EMS countries, second sub-sample (1985:1 - 1992:12)	231
10.4	The long-run sterilization of foreign exchange interventions in the EMS countries, two sub-periods (1973:1 - 1984:12, 1985:1 - 1992:12)	232