917 623 665

Macroeconomic Implications of Financial Dollarization The Case of Uruguay

Edited by Marco Piñón, Gaston Gelos, and Alejandro López-Mejía

Contents

Pref	Preface • •		
Abbreviations			
ì	Overview <i>Marco Piñón</i>		
	Monetary Policy in a Dollarized Economy External Linkages Under Dollarization Financial Vulnerabilities and Insurance Mechanisms	1 2 3	
	Part I. Monetary Policy in a Dollarized Economy		
11	Inflation Process in Uruguay Gaston Gelos and Fernanda Rossi Iriondo	7	
	Inflation Dynamics and Inflation Expectations Determinants of Inflation Expectations Conclusions / Appendix 2.1. Cointegration Tests, Bivariate Vector Error Correction	7 10 13	
	Model, and Tests of Efficiency of Inflation Forecasts Bibliography	14 16	
Ш	Pass-Through, Dollarization, and Credibility in Uruguay Alejandro López-Mejía, Alessandro Rebucci, and Carolina Saizar	17	
	Background Has Pass-Through Declined in Uruguay? Is Monetary Policy Credibility Linked to Financial Dollarization? Conclusions Appendix 3.1. Measuring Credibility Bibliography	17 20 22 24 25 25	
	Part 2. External Linkages Under Dollarization	-	
IV	Role of Bank Lending in the Transmission of Macroeconomic Shocks Gaston Gelos and Marco Piñón	29	
	Descriptive Evidence on the Importance of Bank Lending for Economic Activity Banks' Response to Shocks: Microeconomic Evidence Conclusions Bibliography	30 30 33 33	

Y	What Is the Degree of Competition Intensity in the Uruguayan Banking System? Gaston Gelos and Marco Piñón	34
	Assessing the Degree of Competition Conclusions Bibliography	35 37 37
VI -	What Drives Uruguayan Sovereign Spreads? The Role of Global Factors and Regional Spillovers Gustavo Adler and Stephanie Eble	39
	Stylized Facts What Drives Sovereign Spreads? Conclusions Bibliography	39 43 47 47
	Part 3. Financial Vulnerabilities and Insurance Mechanisms	
VII	Has the Uruguayan Financial System Become More Resilient Shocks? An Analysis Adapting the Merton Framework to Country Without Equity Market Data Marcos Rietti Souto	
	Merton Framework Stress Tests Modified Merton Framework Conclusions Appendix 7.1. Estimating Risk Indicators for the Corporate and Banking Sectors Bibliography	51 52 53 56 57 59
VIII	Optimal Level of Reserves in Financially Dollarized Economies: The Case of Uruguay Fernando M. Gonçalves	60
	Vulnerabilities and the Role of Reserves in Uruguay Optimal Level of Reserves Sensitivity Analysis Conclusions Appendix 8.1. A Model of Optimal Reserve Levels in Financially Dollarized Economies Appendix 8.2. Level of Reserves Required to Cover a 2002-Like Crisis Bibliography	60 62 65 67 67 69
Figur	res	
	 2.1. Actual and 12-Month-Ahead Expected Inflation 2.2. Recursive Coefficient Equation (1) (Recursive ordinary least squares estimates) 2.3. Determinants of Inflationary Expectations: Recursive Coefficients 2.4. Twelve-Month-Ahead Expected Inflation: Actual Versus Fitted (Generalized method of moments-based model) 2.5. Recursive Estimates of Coefficient on Inflation Target (Recursive ordinary least squares estimates) 2.6. Dispersion of Inflation Forecasts 	9 11 12 12

		Inflation in Uruguay	18
	3.2.	Nominal Exchange Rate and Foreign Exchange Rate Intervention	19
	3.3.	A Measure of Financial Sector Development	20
	3.4.	Pass-Through Rolling Regression Coefficients	21
		Deposit Dollarization	22
		Credit Dollarization	22
		A Measure of Credibility	23
		Financial Dollarization and Credibility	24
		Impulse Response Functions	24
ĺ.		Bank Lending in Uruguay	29
	4.2.	Correlations Between Leads and Lags of the Cyclical Components of	21
		Credit and GDP	31
		Bank Credit to the Private Sector in Selected Countries	34
		Concentration Index	35
	6.1.	Uruguay, Latin America and Global Emerging Markets Bond Index	40
		(EMBI) Spreads, 1996–2006	40
		Country Fundamentals and External Factors, 1996–2006	41
	6.3.	Selected Country Spreads and Latin American Emerging Markets	12
	<i>C</i> 1	Bond Index (EMBI) Spread, Pre- and Post-Uruguayan Crisis	42
	0.4.	Standard & Poor's Credit Rating for Selected Latin American	44
	65	Countries, 1996–2006	44
	0.3.	Uruguay and Selected Latin American Country Spreads, Pre- and Postcrisis	45
	71	Merton Framework	52
		Liquidity Ratios After Stress Shocks	53
	7.2.	Capital Adequacy Ratio (Percentage of Risk-Weighted Assets) After	23
	7.5.	Stress Shocks	54
	7.4	Expected Losses Given Default in the Corporate Sector	55
		Banking Sector Default Probability	56
		Relationship Between Assets and Asset Volatility in Uruguay	56
		Default Probabilities: A Scenario Analysis	57
		Uruguay's Corporate Sector: Components of Distance to Distress	58
		Uruguay's Banking Sector Volatilities	59
		Financial Account Reversal, Dollar Deposits, and Reserves in Uruguay	61
		Short-Term Foreign Currency Debt and Foreign Currency	
		Deposits in Uruguay	61
	8.3.	Withdrawal of Foreign Currency Deposits in 2002	62
		Benchmark Measures of Reserve Adequacy	62
		Optimal Versus Actual Level of Reserves in Uruguay	65
		Actual and Implied Reserves	65
		Sensitivity Analysis	66
Tab	les		
	2.1	Consumer Price Index Inflation Regressions with Survey Data	8
		Determinants of Inflation Expectations	10
		Tests of Unbiasedness of Inflation Forecasts	14
		Johansen Cointegration Test Results	14
		Adjustment Coefficients in a Bivariate Vector Error Correction on	
		Actual and Expected Inflation	15
	2A.3.	Tests of Efficiency of Inflation Forecasts	15
		Short- and Long-Run Exchange Rate Pass-Through, Selected Countries	21
		Financing Structure of Firms in Uruguay, 2004	30
		Selected Indicators of Uruguayan Banks by Type, 2006	31
		Differential Response of Local Currency Loan Growth to	
		Monetary Policy Shocks by Bank Characteristic	32

CONTENTS

4.4.	Differential Response of Foreign Currency Loan Growth to	
	Foreign Shocks	33
5.1.	Panzar and Rosse's H Statistic	36
5.2.	Results from Revenue Estimations	36
6.1.	Sovereign Spread Correlation, Pre- and Postcrisis	43
6.2.	Pairwise Granger Causality Tests	44
6.3.	Unit Root Test: Augmented Dickey-Fuller (ADF)	46
6.4.	Variance Decomposition	47
7.1.	2006 Financial Sector Assessment Program: Stress Tests Assumption	53
7.2.	Total Government Assistance to Banks	55
8.1.	Variable Parameters	63
8.2.	Fixed Parameters	63
8.3.	Implicit Parameters	67