The Euro

The First Decade

Edited by

MARCO BUTI,

SERVAAS DEROOSE,

VÍTOR GASPAR

AND

JOÃO NOGUEIRA MARTINS



CAMBRIDGE UNIVERSITY PRESS

Cambridge, New York, Melbourne, Madrid, Cape Town, Singapore, São Paulo, Delhi

Cambridge University Press

The Edinburgh Building, Cambridge CB2 8RU, UK

Published in the United States of America by Cambridge University Press, New York

www.cambridge.org

Information on this title: www.cambridge.org/9789279098420

© European Communities 2010

This publication is in copyright. Subject to statutory exception and to the provisions of relevant collective licensing agreements, no reproduction of any part may take place without the written permission of Cambridge University Press.

First published 2010

Printed in the United Kingdom at the University Press, Cambridge

A catalogue record for this publication is available from the British Library

Library of Congress Cataloguing in Publication data

ISBN 978-9-279-09842-0 Hardback

Cambridge University Press has no responsibility for the persistence or accuracy of URLs for external or third-party Internet websites referred to in this publication, and does not guarantee that any content on such websites is, or will remain, accurate or appropriate.

The information and views set out in this book are those of the authors and do not necessarily reflect those of the Commission of the European Communities.

C:/ITOOLS/WMS/CUP/633865/WORKINGFOLDER/BTI/9789279098420DED.3D V [5-6] 10.11.2009 5:38PM

To Klaus Regling

Contents

List of figur	res	page xi
List of table	?S	xvii
List of boxe	?S	XX
List of cont	ributors	xxi
Foreword By Joaqu	ÍN ALMUNIA	xxvii
Acknowleds	gements	xxxi
Chapter 1	The euro: the first decade and beyond MARCO BUTI, SERVAAS DEROOSE, VÍTOR GASPAR AND JOÃO NOGUEIRA MARTINS	1
Part I Hist	torical perspective	35
Chapter 2	A long-term perspective on the euro michael bordo and harold james	37
Chapter 3	Sui generis EMU BARRY EICHENGREEN	72
Comment 1	Comment on Chapters 2 and 3 NIELS THYGESEN	102
Part II OC	CA theory revisited	113
Chapter 4	The OCA theory and the path to EMU FRANCESCO MONGELLI	115
Chapter 5	A modern reconsideration of the OCA theory GIANCARLO CORSETTI	143
Comment 2	Comment on Chapters 4 and 5 PETER HOELLER	181

viii	Co	ontents
Part III Mo	onetary policy	191
-	ECB credibility and transparency PETRA GERAATS	193
_	Some observations on the ECB's monetary policy MANFRED NEUMANN	230
Comment 3	Comment on Chapters 6 and 7 FRANK SMETS	259
Part IV Fin	ancial markets	281
-	The ECB and the bond market CARLO FAVERO AND FRANCESCO GIAVAZZI	283
Comment 4	Comment on Chapter 8 DOMENICO GIANNONE, MICHELE LENZA AND LUCREZIA REICHLIN	305
•	Financial market integration under EMU TULLIO JAPPELLI AND MARCO PAGANO	315
Comment 5	Comment on Chapter 9 SIMON HAYES	354
Chapter 10	The international role of the euro: a status report ELIAS PAPAIOANNOU AND RICHARD PORTES	s 360
Comment 6	Comment on Chapter 10 ANDRÉ SAPIR	408
Part V Fisc	al policy	413
Chapter 11	EMU's decentralized system of fiscal policy JÜRGEN VON HAGEN AND CHARLES WYPLOS	z 415
Comment 7	Comment on Chapter 11 MARTIN LARCH AND LUCIO PENCH	445
Chapter 12	Government size and output volatility: should we forsake automatic stabilization? XAVIER DEBRUN, JEAN PISANI-FERRY AND ANDRÉ SAPIR	451

Contents		ix
Comment 8	Comment on Chapter 12 GILLES SAINT-PAUL	507
Chapter 13	Fiscal policy, intercountry adjustment and the real exchange rate within Europe CHRISTOPHER ALLSOPP AND DAVID VINES	511
Comment 9	Comment on Chapter 13 ROBERT KOLLMANN	552
Chapter 14	Taxation policy in EMU JULIAN ALWORTH AND GIAMPAOLO ARACHI	557
Comment 10	Comment on Chapter 14 CASPER VAN EWIJK	597
Part VI Gro	owth, trade and volatility	605
Chapter 15	The impact of EMU on growth in Europe RAY BARRELL, DAWN HOLLAND, IANA LIADZE AND OLGA POMERANTZ	607
Comment 11	Comment on Chapter 15 JÖRG DECRESSIN AND EMIL STAVREV	638
Chapter 16	The impact of the euro on international stability and volatility STEFAN GERLACH AND MATTHIAS HOMANN	648
Comment 12		670
Chapter 17	The euro's impact on trade and foreign direct investment	
	RICHARD BALDWIN	678
Comment 13	Comment on Chapter 17 KARL PICHELMANN	710
Part VII Str	ructural reforms	713
Chapter 18	Labour markets in EMU: what has changed and what needs to change	745
	GIUSEPPE BERTOLA	715

Contents X Chapter 19 How product market reforms lubricate shock adjustment in the euro area JACQUES PELKMANS, LOURDES ACEDO MONTOYA AND ALESSANDRO MARAVALLE 759 Comment 14 Comment on Chapters 18 and 19 GERT JAN KOOPMAN 809 Part VIII Enlargement and governance 821 Chapter 20 Euro-area enlargement and euro adoption strategies ZSOLT DARVAS AND GYÖRGY SZAPÁRY 823 Chapter 21 Economic governance in an enlarged euro area IAIN BEGG 870 Comment 15 Comment on Chapters 20 and 21 JEAN PISANI-FERRY 901 References 911 Index 981

Figures

Main chapters

4.1	The three stages of Economic and Monetary Union page	126
6.1	Euro-area HICP inflation (year-on-year)	194
6.2	Euro-area HICP inflation (annual average)	195
6.3	Increase in euro-area HICP (per annum)	195
6.4	Euro-area real GDP growth (annual average)	196
6.5	ECB main refinancing rate and real three-month Euribor	197
6.6	Long-term euro-area breakeven inflation	199
6.7	Euro-area inflation expectations	200
6.8	Dispersion of euro-area inflation expectations	201
6.9	ECB credibility	203
6.10	Time-inconsistency of medium-term-oriented strategy	224
7.1	ECB's interest rate policy	242
7.2	Monetary pillar and money growth	247
8.1	Yields to maturity of US and German ten-year benchmark	
	bonds	284
8.2	US and Bundesbank-ECB monetary policy rates	284
8.3	Ten-year expected inflation	288
8.4	Ten-year yields – ten-year expected inflation	288
8.5	Ten-year expected monetary policy	289
8.6	Ten-year term premia	289
8.7	US VAR-based ten-year expected inflation and breakeven	
	inflation in US ten-year TIPS	290
8.8	VAR-based ten-year euro-area expected inflation and	
	breakeven inflation in ten-year French OATi	290
8.9	Dynamic simulations of VARs estimated over three	
	different decades	292
8.10	Counterfactual simulations: pre-1990 structure with post-	
	1990 shocks, and post-1990 structure with pre-1990 shocks	294
8.11.1	Impulse responses to US monetary policy shocks	297
8.11.2	Impulse responses to US monetary policy shocks	298

xii List of figures

8.12.1	Impulse responses to US term premia shocks	299
8.12.2	Impulse responses to US term premia shocks	300
8.13	Impulse responses to Bundesbank-ECB monetary policy	
	shocks	301
8.14	Impulse responses to German-Euro term premia shocks	302
9.1	Road map	316
9.2	Indicators of domestic financial development in the euro	
	area	321
9.3	Gross international investment position in the euro area,	
	Japan and USA	323
9.4	Ten-year benchmark bond yield spreads before and after	
	EMU, 1990–2007	324
9.5	Ten-year benchmark bond yield spreads under EMU	326
9.6	Standard deviation of ten-year benchmark bond yield	
	spreads	327
9.7	Potential growth of value added and output in	
	manufacturing industry by country: raising financial	
	development to the US standard	336
9.8	Potential growth of value added and output in	
	manufacturing industry by sector: raising financial	
	development to the US standard	336
9.9	Correlations between saving and investment for EU	
	countries	340
9.10	Correlations between saving and investment for OECD	
	countries	341
10.1	Net issues of international debt securities (bonds, notes	
	and money market instruments)	390
10.2	Amounts outstanding international long-term debt	
	securities (bonds, notes and money market instruments)	391
10.3	Amounts outstanding international long-term debt	
	securities (bonds and notes)	392
12.1	Historical volatility of US GDP and consumption	464
12.2	The Taylor curve and the inflation-output volatility	
	tradeoff	465
12.3	Total expenditure to GDP ratio (1963-2006)	468
12.4	Social security vs. non-social security expenditure (ratio to	
	GDP 1963–2006)	470
12.5	Openness to trade and government size	471
12.6	The Great Moderation (1963–2006)	473

List of	figures	xiii
12.7	The Great Moderation: more open economies (1963–2006)	473
12.8	Volatility by country groupings: openness and government	
	size	475
12.9	The changing relationship between volatility and	
	government size	476
	Government size and change in output volatility	477
12.11	Variance decomposition of US household consumption,	470
10.10	pre- and post-1984	478
12.12	Variance decomposition of household consumption in	470
10.10	selected euro-area countries, pre- and post-1984	479
12.13	Government size and estimated impact on volatility of an	
	increase in government expenditure by 1 percentage point	401
121	of GDP	491
	Real exchange rate	516 516
	Real short-term rate of interest	
	Real long-term rate of interest	517517
	Sectoral balances for Germany	518
	Sectoral balances for Spain Stability boundary as a function of proportion of	318
13.0	Stability boundary as a function of proportion of backward-looking price setters, ω , and proportion of	
	credit-constrained consumers, κ .	537
137	Response to a shock of -1 to competitiveness, s.	540
	Long-term trends in general government total expenditure,	340
17.1	total revenue and overall tax ratio in the eurozone	560
14 2	Implicit tax rates on labour and capital	578
	Changes in average tax rates (ATR) on labour income	370
11.5	2000–6	583
14 4	Progressivity of income taxes: 2000 and 2006	584
	Output growth in the euro area, the USA, the UK and	501
13.1	Sweden	609
15.2	GDP, labour input and labour productivity growth	610
	Growth of total factor productivity	613
	TFP growth (basic prices)	614
	Relative wages by skill category	615
	Per cent of university graduates in total employment	617
	Skills-adjusted TFP growth	617
	Unadjusted TFP growth	618
	Skills components of TFP growth	619

xiv List of figures

16.1	Cross-plots of volatilities in the pre-EMU (1990–8) and EMU (1999–2006) periods	651
162	Cross-plots of country-pair specific volatilities in the	001
10.2	pre-EMU (1990–8) and EMU (1999–2006) periods	653
17 1	Export decision in the HFT model and the newly traded	033
17.1	goods hypothesis	682
172	Export vs. FDI decision in the HFT model	686
	Export and unbundling FDI decision in the HFT model	688
	The Mongelli-Dorrucci-Agur index of EU integration:	000
1,	Single Market and monetary and financial subindices	693
17 5	Swedish firm-level data, intensive and extensive margins	075
17.0	(1999 = 1.0)	702
17.6	Hungarian firm-level data, intensive and extensive margins	, 02
1,10	(1999 = 1.0)	703
17.7	Evolution of zeros (prima facie evidence on the newly traded	, 00
	goods hypothesis)	704
18.1	The effect of minimum wages or labour taxes that finance	
	subsidies to workers	719
18.2	Flatter slope of labour demand strengthens the employment	
	and unemployment impact of policy wedges	720
18.3	Deviations from country means of unemployment rates in	
	the EMU and non-EMU subsamples of the EU15	733
18.4	Deviations from country means of employment rates in the	
	EMU and non-EMU subsamples of the EU15	734
18.5.	Deviations from country means of labour tax rates in the	
	EMU and non-EMU subsamples of the EU15	738
18.6	Deviations from country means of employment protection	
	indicators in the EMU and non-EMU subsamples of the	
	EU15	739
18.7	Employment protection and unemployment insurance in the	
	EU15, 1995–2003	741
	Employment and labour tax rates in the EU15, 1995–2005	745
19.1	Product market reforms as subsets of microeconomic	
	reforms	763
	Product market reforms for adjustment	769
19.3	Graphical representation of the sectoral resilience to supply	
	shocks	780
19.4	Graphical representation of the sectoral resilience to supply	
	and demand shocks	781

List of figures ΧV 19.5 Designing market reforms in the euro-area context 794 20.1 GDP per capita in purchasing power standards (EA12 = 100), 1995-2008826 20.2 Price level of consumption (EA12 = 100), 1995–2008 827 20.3 Domestic credit (in per cent of GDP), 1995–2007 829 20.4 Nominal exchange rate against the ECU/EUR (1995 = 100), 1995 - 2008831 20.5 Total economy unit labour cost based real effective exchange rates (2000 = 100), 2000-7832 20.6 Three-month interbank interest rates, 1995-2008 839 20.7 Ten-year government bond yields, 1995–2008 840 20.8 Bank loans to the household sector, 2001–7 (in per cent of GDP) 843 20.9 Inflation rate (in per cent), 1995-2008 845 20.10 Contribution to GDP growth, averages of 1997-2001 and 2002–6 (in percentage points) 846 20.11 Balance of the current account (in per cent of GDP), 1995-2008 848 20.12 Export market shares in total imports of the world 849 (in per cent), 1995–2008 20.13 Catching-up of Austria and Germany, 1960–2004 858 20.14 Inflation criterion: current and suggested reference values, December 1997 - July 2008 862 Comments C2.1 The growth context 182 C2.2 Real effective exchange rate and gross exports 184 C2.3 Real government spending 187 C3.1 Inflation rates and longer-term inflation expectations in the 263 euro area C3.2 Five-year five-year-forward breakeven inflation rates in the euro area 265 C3.3 Disagreement about inflation expectations 266 C3.4 Cross-section distribution of five-year-ahead inflation expectations (SPF) 267 C3.5 Main policy rates of the ECB 271 C3.6 Short-term inflation and growth forecasts in the euro area 272 C3.7 Actual and benchmark changes in the policy rate 274

xvi List of figures

C3.8	Actual and fitted policy rate	276
C3.9	Summary indicators of monetary policy analysis at the	
	ECB	277
C4.1	Inflation rates	307
C4.2	Long-run inflation expectations from the SPF	307
C4.3	Short-term interest rates in the euro area	309
C4.4	Long-term interest rates in the euro area	310
C4.5	Five years (annualized) moving average of per capita real	
	GDP growth rates	311
C4.6	Levels of per capita real GDP	312
C10.1	Actual and optimal CIT rates in EU countries	599
C10.2	Welfare gains (% GDP) of unilateral reduction in CIT by	
	1 point	600
C11.1	Euro-area PPP GDP per capita relative to the United States	642
C11.2	Compensation per employee and unemployment	643
C11.3	Accumulating wage-setting shocks in the euro area	643
C11.4	Euro area: TFP adjusted for labor input (1995–2004 vs.	
	1980–95)	645
C12.1	Size of capital markets (percentage of GDP)	676

Tables

Main chapters

1.1	Main indicators for the euro area and other large	
	world economies	page 3
1.2	Economic performance in the euro area and the USA	5
6.1	Correlation between breakeven inflation and SPF	
	measures	205
6.2	Correlation between SPF measures and past inflation	206
7.1	Comparative economic performance; mean	231
7.2	Forward-looking Taylor estimates, January 1999–	
	December 2002	240
7.3	Forecasts of GDP growth	251
7.4	Forecasts of inflation	252
8.1	Variance decomposition of European ten-year rates	296
10.1	Functions of an international currency	368
10.2	Share of main currencies in total identified official holding	gs
	of foreign exchange	372
10.3	Currency breakdown of the total foreign exchange reserve	es
	of selected countries (in percentages)	377
10.4	De facto dollar and euro pegs (Cobham classification)	382
10.5	International trade invoicing patterns in Japan	383
11.1	The budget deficit reaction function	424
11.2	Tests	425
12.1	Government size and volatility: basic results	485
12.2	Government size and the Great Moderation	487
12.3	Government size and volatility: interactions and non-	
	linearities	488
12.4	Output volatility and alternative measures of government	
	size	492
12.5	Government size and volatility: basic results with output	
	gap volatility	495

xvii

xviii List of tables

12.6	Government size and volatility: additional controls	496
12.7	Government size and volatility: instrumental variables	497
12.8	Government size and the Great Moderation	499
12.9	Government size and volatility: instrumental variables	500
12.10	Government size and volatility: interactions and non-	
	linearities	502
14.1	Tax structure in the euro area	562
14.2	Tax structure in EMU and OECD countries	564
15.1	Output growth – country details	609
15.2	Average annual growth of labour input	611
15.3	Average annual growth of labour productivity	611
15.4	The growth rate of skills	616
15.5	Stock of FDI as a per cent of GDP	620
15.6	Stock of R&D – annual average growth rate	621
15.7	Unit root test results	627
15.8	Cointegration of the long run	628
15.9	Wald test results on commonality	629
15.10	Final equations	630
15.11	Robustness check for EMU effects – adding the dummy	
	back in	631
15.12	Openness effects – adding the variables back in	631
15.13	FDI effects – adding the variables back in	631
15.14	Substituting and adding real exchange rate volatility effects	633
16.1	Pre-EMU volatility and the international and internal	
	dimensions	656
16.2	EMU-period volatility and the international and internal	
	dimensions	657
16.3	EMU and the decline in volatility	660
16.4	EMU and international consumption risk sharing	665
17.1	OLS on EU15 data, 1995–2006	694
17.2	OLS on EU15 data, 1990–2006	696
18.1	Simple mean difference between before and after EMU	735
18.2	Regressions on EMU dummy	735
18.3	Regressions on EMU dummy	736
18.4	Regressions on a trend	736
18.5	Regressions on a trend	737
18.6	Simple mean difference between before and after EMU	739
18.7	Regressions on EMU dummy	740
18.8	Regressions on EMU dummy	741

List of	tables	xix
18.9	Regressions on a trend	742
	Regressions on a trend	742
	Regression of labour tax rates on EMU dummy and year dummies	743
18.12	Simple mean difference between openness indicators	
	before and after EMU	743
18.13	Regressions on EMU dummy	744
	Regressions on EMU dummy	744
	Regressions of total employment rate on tax measures	
	and their interactions with EMU dummy	746
18.16	Regressions of long-term unemployment rate on an EPL	
	indicator and its interactions with EMU dummy	748
18.17	Regressions of income inequality indicators on	
	unemployment, social policy, and EMU dummy	751
18.18	Regressions of private credit/GDP on EMU dummy	753
19.1	Sector classification	776
19.2	First measure of the sectoral resilience to supply shocks	778
19.3	Second measure of the sectoral resilience to	
	supply shocks	779
19.4	Measure of the sectoral resilience to demand shocks	779
19.5	Relatively rigid sectors in the euro area	782
19.6	Sector-by-sector list of the most rigid countries in the	
	euro area	783
19.7	Sector-by-sector measure of the relative importance of	
	common shocks	784
19.8	Inflation in EU25 network industries	790
20.1	Projected annual average price level convergence	834
20.2	Share of foreign currency loans, 2004–6	835
Comn	nents	
C3.1	Estimation of a simple policy rule	275
	Percentage of variance of interest rates accounted for by	
	idiosyncratic sources of fluctuation	310
C4.2	Estimated beta coefficients: panel regression results	313
	Euro area, USA, Japan, and UK – key macroeconomic	
	variables (seven-year average, in per cent)	641

Boxes

4.1	Three stages of EMU and the launch of the euro	page	125
19.1	Indicators measuring product market reform		765
19.2	Spillovers and complementarities: an additional reason		
	to reform		797
19.3	Comparing sectoral reform needs in different approach	es	786

Lourdes Acedo Montoya CEPS, Brussels

Christopher Allsopp Oxford Institute of Energy Studies and New College, University of Oxford

Julian Alworth Said Business School, Oxford University and Econpublica – Università Bocconi

Giampaolo Arachi Università del Salento and Econpubblica – Università Bocconi

Richard Baldwin Graduate Institute, Geneva

Ray Barrell National Institute of Economic and Social Research

Iain Begg

European Institute, London School of Economic and Political Science

Giuseppe Bertola Università di Torino and CEPR

Michael Bordo Rutgers University and NBER

Marco Buti Directorate-General for Economic and Financial Affairs (European Commission)

xxii

Giancarlo Corsetti European University Institute, University of Rome III and CEPR

Zsolt Darvas

Institute of Economics at the Hungarian Academy of Sciences and Corvinus University of Budapest

Xavier Debrun International Monetary Fund

Jörg Decressin International Monetary Fund

Servaas Deroose

Directorate-General for Economic and Financial Affairs (European Commission)

Barry Eichengreen University of California, Berkeley

Carlo Favero IGIER-Università Bocconi and CEPR

Vítor Gaspar

Bureau of European Policy Advisers (European Commission)

Petra Geraats University of Cambridge

Stefan Gerlach Institute for Monetary and Financial Stability, University of Frankfurt and CEPR

Domenico Giannone European Central Bank, ECARES and CEPR

Francesco Giavazzi

IGIER-Università Bocconi, MIT, CEPR and NBER Philipp Hartmann

European Central Bank

Simon Hayes Barclays Capital

xxiii

Peter Hoeller

OECD

Matthias Hoffmann

Institute for Empirical Research in Economics,

University of Zurich

Dawn Holland

National Institute of Economic and Social Research

Harold James

Princeton University and European University Institute

Tullio Jappelli

University of Naples Federico II, CSEF and CEPR

Robert Kollmann

ECARES, ECORE, Université Libre de Bruxelles,

Université Paris XII and CEPR

Gert Jan Koopman

Directorate-General for Economic and Financial

Affairs (European Commission)

Martin Larch

Bureau of European Policy Advisers (European Commission)

Michele Lenza

European Central Bank

Iana Liadze

National Institute of Economic and Social Research

Alessandro Maravalle

College of Europe, Bruges

Francesco Mongelli

European Central Bank

Manfred Neumann

University of Bonn

João Nogueira Martins

Directorate-General for Economic and Financial

Affairs (European Commission)

xxiv

Marco Pagano

University of Naples Federico II, CSEF and CEPR

Elias Papaioannou

Dartmouth College and CEPR

Jacques Pelkmans

College of Europe, Bruges, and Vlerick School of Management,

Leuven and Ghent

Lucio Pench

Directorate-General for Economic and Financial Affairs

(European Commission)

Karl Pichelmann

European Commission and IEE, Université Libre de Bruxelles

Jean Pisani-Ferry

Bruegel, Brussels, and Université Paris-Dauphine

Olga Pomerantz

National Institute of Economic and Social Research

Richard Portes

London Business School and CEPR

Lucrezia Reichlin

European Central Bank and CEPR

Gilles Saint-Paul

Toulouse School of Economics and Birkbeck College

André Sapir

Université Libre de Bruxelles, Bruegel and CEPR

Frank Smets

European Central Bank

Emil Stavrey

International Monetary Fund

György Szapáry

Central European University

XXV

Niels Thygesen University of Copenhagen and OECD

Casper van Ewijk CPB Netherlands Bureau for Economic Policy Analysis, University of Amsterdam

David Vines Balliol College, University of Oxford; Australian National University and CEPR

Jürgen von Hagen University of Bonn

Charles Wyplosz Graduate Institute of International Studies and CEPR