



# INTERNATIONAL JOURNAL OF CENTRAL BANKING

## Special Issue: Challenges to Achieving Price Stability

Introduction

Opening Remarks

*Manuel Ramos-Francia*

The Financial and Macroeconomic Effects of the OMT Announcements

*Carlo Altavilla, Domenico Giannone, and Michele Lenza*

Discussant: *Stefania D'Amico*

Beggar-Thy-Neighbor? The International Effects of ECB

Unconventional Monetary Policy Measures

*Kristina Bluwstein and Fabio Canova*

Discussant: *Klaus Adam*

Options-Implied Probability Density Functions for Real Interest Rates

*Jonathan H. Wright*

Discussant: *Eric T. Swanson*

The Effect of Unconventional Monetary Policy on Inflation Expectations:  
Evidence from Firms in the United Kingdom

*Lena Boneva, James Cloyne, Martin Weale, and Tomasz Wieladek*

Discussant: *Julio A. Carrillo*

Commentary: Long-Run Inflation Uncertainty

*Stefan Nagel*

Policy Spillovers and Synergies in a Monetary Union

*Oscar Arce, Samuel Hurtado, and Carlos Thomas*

Discussant: *Andrea Ferrero*

Financial Intermediation in a Global Environment

*Victoria Nuguer*

Discussant: *Robert Kollmann*

Rule-of-Thumb Consumers and Labor Tax Cut Policy at the Zero Lower Bound

*Lorant Kaszab*

Discussant: *Kolver Hernandez*

Commentary: Dynamic Stochastic General Equilibrium Models and  
Their Discontents

*Tamim Bayoumi*



**Special Issue:  
Challenges to Achieving Price Stability**

Introduction	1
Opening Remarks	3
<i>Manuel Ramos-Francia</i>	
The Financial and Macroeconomic Effects of the OMT Announcements	29
<i>Carlo Altavilla, Domenico Giannone, and Michele Lenza</i>	
Discussion: <i>Stefania D'Amico</i>	59
Beggar-Thy-Neighbor? The International Effects of ECB Unconventional Monetary Policy Measures	69
<i>Kristina Bluwstein and Fabio Canova</i>	
Discussion: <i>Klaus Adam</i>	121
Options-Implied Probability Density Functions for Real Interest Rates	129
<i>Jonathan H. Wright</i>	
Discussion: <i>Eric T. Swanson</i>	151
The Effect of Unconventional Monetary Policy on Inflation Expectations: Evidence from Firms in the United Kingdom	161
<i>Lena Boneva, James Cloyne, Martin Weale, and Tomasz Wieladek</i>	
Discussion: <i>Julio A. Carrillo</i>	197
Long-Run Inflation Uncertainty	207
<i>Stefan Nagel</i>	
Policy Spillovers and Synergies in a Monetary Union	219
<i>Óscar Arce, Samuel Hurtado, and Carlos Thomas</i>	
Discussion: <i>Andrea Ferrero</i>	279
Financial Intermediation in a Global Environment	291
<i>Victoria Nuguer</i>	
Discussion: <i>Robert Kollmann</i>	345
Rule-of-Thumb Consumers and Labor Tax Cut Policy at the Zero Lower Bound	353
<i>Lorant Kaszab</i>	
Discussion: <i>Kolver Hernandez</i>	391
Dynamic Stochastic General Equilibrium Models and Their Discontents	403
<i>Tamim Bayoumi</i>	

Copyright © 2016 by the Association of the International Journal of Central Banking. All rights reserved. Brief excerpts may be reproduced or translated provided the source is cited. Consult [www.ijcb.org](http://www.ijcb.org) for further information.

The *International Journal of Central Banking* is published quarterly (ISSN: 1815-4654). Online access to the publication is available free of charge at [www.ijcb.org](http://www.ijcb.org). Individual print subscriptions are available. Orders may be placed by phone (001 415 974 2035), via fax (001 415 974 2168), or by e-mail ([editor@ijcb.org](mailto:editor@ijcb.org)).

Renewals, claims, address changes, and requests for permission to reprint material from this journal should be addressed to:

International Journal of Central Banking  
Economic Research Department  
Federal Reserve Bank of San Francisco  
101 Market Street  
San Francisco, CA 94105  
USA

Phone: 001 415 974 2035  
Fax: 001 415 974 2168  
E-mail: [editor@ijcb.org](mailto:editor@ijcb.org)

The views expressed in this journal do not necessarily represent the views of the Association of the International Journal of Central Banking or any of its members.

ISSN: 1815-4654

# International Journal of Central Banking

## Board of Directors

### Chairman

Claudio Borio, *Bank for International Settlements*

### Board Members

Q. Farooq Akram, *Norges Bank*  
Abdulahman Al-Hamid, *Saudi Arabian Monetary Agency*  
David E. Altig, *Federal Reserve Bank of Atlanta*  
Carlos Hamilton Vasconcelos Araujo, *Central Bank of Brazil*  
Jan Marc Berk, *The Nederlandsche Bank*  
Mohamed Tahar Bouhouche, *Bank of Algeria*  
Lillian Cheung, *Hong Kong Monetary Authority*  
Laurent Clerc, *Bank of France*  
Francisco G. Dakila Jr., *Central Bank of the Philippines*  
Michael Dotsey, *Federal Reserve Bank of Philadelphia*  
William English, *Federal Reserve Board*  
Gabriel Fagan, *Central Bank of Ireland*  
Jiang Feng, *People's Bank of China*  
Manuel Ramos Francia, *Bank of Mexico*  
Jeffrey C. Fuhrer, *Federal Reserve Bank of Boston*  
Kamil Galuscak, *Czech National Bank*  
Niels Lynggård Hansen, *Danmarks Nationalbank*  
Philipp Hartmann, *European Central Bank*  
Elena Iorga, *National Bank of Romania*  
Juan F. Jimeno, *Bank of Spain*  
George A. Kahn, *Federal Reserve Bank of Kansas City*  
Sujit Kapadia, *Bank of England*  
Ali Hakan Kara, *Central Bank of Turkey*  
Christopher Kent, *Reserve Bank of Australia*  
Evan Koenig, *Federal Reserve Bank of Dallas*  
Ana Christina Leal, *Bank of Portugal*  
Carlos Lenz, *Swiss National Bank*  
Jesper Lindé, *Sveriges Riksbank*  
Choy Keen Meng, *Monetary Authority of Singapore*  
John McDermott, *Reserve Bank of New Zealand*  
Emanuel Moench, *Deutsche Bundesbank*  
Alberto Naudon, *Central Bank of Chile*  
Edward Offenbacher, *Bank of Israel*  
Fabio Panetta, *Bank of Italy*  
Michael D. Patra, *Reserve Bank of India*  
Thórarinn G. Pétursson, *Central Bank of Iceland*  
Ivan Ribnikar, *Bank of Slovenia*  
Lawrence Schembri, *Bank of Canada*  
Sam Schulhofer-Wohl, *Federal Reserve Bank of Minneapolis*  
Mark Schweitzer, *Federal Reserve Bank of Cleveland*  
Jan Smets, *National Bank of Belgium*  
Young Kyung Suh, *Bank of Korea*  
Daniel Sullivan, *Federal Reserve Bank of Chicago*  
Juha Tarkka, *Bank of Finland*  
George Tavlas, *Bank of Greece*  
Joseph Tracy, *Federal Reserve Bank of New York*  
Dobieslaw Tymoczko, *National Bank of Poland*  
Hernando Vargas Herrera, *Banco de la República*  
Christopher Waller, *Federal Reserve Bank of St. Louis*  
Kenichirou Watanabe, *Bank of Japan*  
John Weinberg, *Federal Reserve Bank of Richmond*  
Ksenia Yudaeva, *Central Bank of Russian Federation*

## Editorial Board

### Managing Editor

John C. Williams

Federal Reserve Bank of San Francisco

### Co-editors

Pierpaolo Benigno LUISS Guido Carli	Harrison Hong Princeton University	Rafael Repullo CEMFI
Michael B. Devereux University of British Columbia	Loretta Mester Federal Reserve Bank of Cleveland	Stephanie Schmitt-Grohe Columbia University

### Associate Editors

Patrick Bolton University of Columbia	Jordi Galí Centre de Recerca en Economia Internacional (CREI)	Eli M. Remolona Bank for International Settlements
Michael D. Bordo Rutgers University	Marvin Goodfriend Carnegie Mellon University	Hélène Rey London Business School
Mark Carey Federal Reserve Board	Michael B. Gordy Federal Reserve Board	Jean-Charles Rochet University of Toulouse
Pierre Collin-Dufresne University of Columbia	Luigi Guiso European University Institute	Andrew K. Rose University of California, Berkeley
Guy Debelle Reserve Bank of Australia	Andrew G. Haldane Bank of England	Klaus Schmidt-Hebbel Organisation for Economic Co-operation and Development (OECD)
Douglas W. Diamond University of Chicago Graduate School of Business	Takatoshi Ito University of Tokyo	Lars E.O. Svensson Sveriges Riksbank
Francis Diebold University of Pennsylvania	David Lando Copenhagen Business School	Jürgen von Hagen University of Bonn
Michael Dotsey Federal Reserve Bank of Philadelphia	Philip Lane Trinity College Dublin	Ernst-Ludwig von Thadden University of Mannheim
Darrell Duffie Stanford University	Francesco Lippi University of Sassari	Tsutomu Watanabe University of Tokyo
	Carmen M. Reinhart Harvard Kennedy School	

## Advisory Board

Franklin Allen The Wharton School of the University of Pennsylvania	Hyun Shin Princeton University	Michael Woodford Columbia University
Charles Goodhart London School of Economics	Kazuo Ueda University of Tokyo	John Taylor Stanford University
	Carl E. Walsh University of California	