

# António Rua

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Banco de Portugal  
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## EDUCATION

Ph.D. in Economics, Technical University of Lisbon, 2011 (Distinction).  
M.Sc. in Economics, Universidade NOVA de Lisboa, 2003 (Best M.Sc. Student Award).  
*Licenciatura* in Economics, Universidade NOVA de Lisboa, 1999.

## EMPLOYMENT

Economist at the Economic Research Department of Banco de Portugal since 1999:

2006-present Head of the Short-term Analysis Unit  
2003-present Short-term Analysis Unit of the Portuguese Economy Division  
2000-2003 Euro Area Conjunctural and Forecasting Unit of the Monetary Policy  
Division  
1999-2000 Forecasting Unit of the Portuguese Economy Division

Teaching:

2003-2010 Universidade NOVA de Lisboa (Econometrics; Statistics; Data Analysis  
and Probability)

## PUBLICATIONS

### Refereed Publications

15) “A wavelet-based assessment of market risk: The emerging markets case” (with Luís C. Nunes), **Quarterly Review of Economics and Finance**, (forthcoming).

14) “Determining the number of global and country-specific factors in the euro area” (with Francisco Dias and Maximiano Pinheiro), **Studies in Nonlinear Dynamics & Econometrics**, (forthcoming).

13) “Money growth and inflation in the euro area: a time-frequency view”, **Oxford Bulletin of Economics and Statistics**, 2012, doi: 10.1111/j.1468-0084.2011.00680.x.

12) “Tracking the US business cycle with a singular spectrum analysis” (with Miguel de Carvalho and Paulo C. Rodrigues), **Economics Letters**, 2012, 114, 32-35.

- 11) “A wavelet approach for factor-augmented forecasting”, **Journal of Forecasting**, 2011, vol. 30, 666-678.
- 10) “Measuring comovement in the time-frequency space”, **Journal of Macroeconomics**, 2010, vol. 32, 685-691.
- 9) “Inflation expectations in the euro area: Are consumers rational?” (with F. Dias and C. Duarte), **Review of World Economics**, 2010, vol. 146, no. 3, 591-607.
- 8) “Inflation (mis)perceptions in the euro area” (with F. Dias and C. Duarte), **Empirical Economics**, 2010, vol. 39, 353-369.
- 7) “Forecasting using targeted diffusion indexes”, (with F. Dias and M. Pinheiro), **Journal of Forecasting**, 2010, vol. 29, no. 3, 341-352.
- 6) “International comovement of stock market returns: a wavelet analysis” (with Luís C. Nunes), **Journal of Empirical Finance**, 2009, vol. 16, 632-639.
- 5) “An input-output analysis: linkages vs. leakages” (with H. J. Reis), **International Economic Journal**, 2009, vol. 23, no. 4, 527-544.
- 4) “Short-term forecasting of GDP using large datasets: A pseudo real-time forecast evaluation exercise” (with G. Rünstler, K. Barhoumi, S. Benk, R. Cristadoro, A. Den Reijer, A. Jakaitiene, P. Jelonek, K. Ruth, C. Van Nieuwenhuyze), **Journal of Forecasting**, 2009, vol. 28, no. 7, 595-611.
- 3) “Forecasting inflation through a bottom-up approach: How bottom is bottom?” (with C. Duarte), **Economic Modelling**, 2007, 24, 941-953.
- 2) “Tracking the business cycle of the Euro area: a multivariate model-based band-pass filter” (with J. Valle e Azevedo and S. J. Koopman), **Journal of Business & Economic Statistics**, 2006, vol. 24, no 3, 278-290.
- 1) “Coincident and leading indicators for the euro area: A frequency band approach” (with L. C. Nunes), **International Journal of Forecasting**, 2005, vol. 21, no 3, 503-523.

### **Other Publications**

- 5) “The quarterly national accounts in real-time: an analysis of the revisions over the last decade” (with F. Cardoso), Economic Bulletin, Autumn 2011, 137-154, Banco de Portugal (also available in Portuguese as “As contas nacionais trimestrais em tempo real: uma análise das revisões na última década”, Boletim Económico Outono 2011, 147-164, Banco de Portugal).
- 4) “Inflation perceptions and expectations in the euro area and Portugal” (with F. Dias and C. Duarte), Economic Bulletin, Spring 2009, 167-180, Banco de Portugal (also available in Portuguese as “Percepção e expectativas de inflação na área do euro e Portugal”, Boletim Económico Primavera 2009, 179-193, Banco de Portugal).
- 3) “A new coincident indicator for the Portuguese private consumption”, Economic Bulletin, Autumn 2005, 65-72, Banco de Portugal (also available in Portuguese as “Um

novo indicador coincidente para o consumo privado em Portugal”, Boletim Económico Outono 2005, 69-76, Banco de Portugal).

2) “A new coincident indicator for the Portuguese economy”, Economic Bulletin June 2004, 21-28, Banco de Portugal (also available in Portuguese as “Um novo indicador coincidente para a economia portuguesa”, Boletim Económico Junho 2004, 21-29, Banco de Portugal).

1) “Composite indicators for the euro area economic activity”, Economic Bulletin September 2002, 87-100, Banco de Portugal (also available in portuguese as “Indicadores compósitos para a actividade económica na área do euro”, Boletim Económico Setembro 2002, 95-109, Banco de Portugal).

### **Working Papers**

20) “Cohesion within the euro area and the U. S.: a wavelet-based view” (with Artur Silva Lopes), Working Paper no. 4/2012, 2012, Banco de Portugal.

19) “A wavelet-based assessment of market risk: The emerging markets case” (with Luís C. Nunes), Working Paper no. 3/2012, 2012, Banco de Portugal.

18) “Asset pricing with a bank risk factor” (with João Pedro Pereira), Working Paper no. 2/2012, 2012, Banco de Portugal.

17) “Money growth and inflation in the euro area: a time-frequency view”, Working Paper no. 22/2011, 2011, Banco de Portugal.

16) “Tracking the US business cycle with a singular spectrum analysis” (with M. Carvalho and P. C. Rodrigues), Working Paper no. 9/10, 2010, Banco de Portugal.

15) “Extremal dependence in international output growth: Tales from the tails” (with M. Carvalho), Working Paper no. 8/10, 2010, Banco de Portugal.

14) “A wavelet approach for factor-augmented forecasting”, Working Paper no. 7/10, 2010, Banco de Portugal.

13) “Nonstationary extremes and the US business cycle” (with M. Carvalho and K. F. Turkman), Working Paper no. 3/10, 2010, Banco de Portugal.

12) “Measuring comovement in the time-frequency space”, Working Paper no. 1/10, 2010, Banco de Portugal.

11) “Dynamic factor models with jagged edge panel data: Taking on board the dynamics of the idiosyncratic components” (with F. Dias and M. Pinheiro), Working Paper no. 13/09, 2009, Banco de Portugal.

10) “International comovement of stock market returns: a wavelet analysis” (with Luís C. Nunes), Working Paper no. 4/09, 2009, Banco de Portugal.

9) “Inflation expectations in the euro area: Are consumers rational?” (with F. Dias, C. Duarte), Working Paper no. 23/08, 2008, Banco de Portugal.

- 8) “Determining the number of factors in approximate factor models with global and group-specific factors” (with F. Dias and M. Pinheiro), Working Paper no. 9/08, 2008, Banco de Portugal.
- 7) “Forecasting using targeted diffusion indexes”, (with F. Dias and M. Pinheiro), Working Paper no. 7/08, 2008, Banco de Portugal.
- 6) “Short-term forecasting of GDP using large datasets: A pseudo real-time forecast evaluation exercise” (with K. Barhoumi, S. Benk, R. Cristadoro, A. Reijer, A. Jakaitiene, P. Jelonek, G. Rünstler, K. Ruth and C. van Nieuwenhuyze), ECB Occasional Paper Series no. 84, 2008, European Central Bank.
- 5) “Inflation (mis)perceptions in the euro area” (with F. Dias, C. Duarte), Working Paper no. 15/07, 2007, Banco de Portugal.
- 4) “An input-output analysis: linkages vs. leakages” (with H. J. Reis), Working Paper no. 17/06, 2006, Banco de Portugal.
- 3) “Forecasting inflation through a bottom-up approach: the Portuguese case” (with C. Duarte), Working Paper no. 2/05, 2005, Banco de Portugal.
- 2) “Tracking growth and the business cycle: a stochastic common cycle model for the euro area” (with J. Valle e Azevedo and S. J. Koopman), Working Paper no. 16/03, 2003, Banco de Portugal (also published as Discussion Paper no. 03-069/4, Tinbergen Institute).
- 1) “Coincident and leading indicators for the euro area: a frequency band approach” (with L. C. Nunes), Working Paper no. 7/03, 2003, Banco de Portugal.

**Refereeing for:** The Review of Economics and Statistics, Oxford Bulletin of Economics and Statistics, Econometric Reviews, Studies in Nonlinear Dynamics and Econometrics, Journal of Macroeconomics, Journal of Forecasting, Economic Modelling, Journal of Empirical Finance, Journal of Banking and Finance, Quarterly Review of Economics and Finance, Journal of Business Economics and Management, International Journal of Managerial Finance, Emerging Markets Finance and Trade, Portuguese Economic Journal, International Journal of Mathematical Modelling and Numerical Optimisation.

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