

**RESEARCH MEMORANDUM**

**2010**

BANCO DE **ESPAÑA**  
Eurosistema



RESEARCH MEMORANDUM, 2010



## CONTENTS

|  |  |    |
|--|--|----|
| <b>1</b>   | <b>Introduction</b>  | 7  |
| <b>2</b>   | <b>Priority areas of analysis</b>  | 7  |
| <b>3</b>   | <b>Relations with academia</b>   | 9  |
| 3.1  | Services provided to the research community  | 10 |
| 3.1.1  | Statistics   | 10 |
| 3.1.2  | Statistical and econometric software   | 11 |
| 3.1.3  | Training courses   | 12 |
| 3.2  | Seminars and conferences   | 12 |
| 3.2.1  | Economic research seminars   | 12 |
| 3.2.2  | Conferences  | 14 |
| <b>4</b>   | <b>Publications</b>  | 14 |
| <b>APPENDIX: List of external publications in 2010</b> |  | 15 |
| 1  | Publications in anonymously-refereed journals  | 15 |
| 1.1  | Published in 2010  | 15 |
| 1.2  | Forthcoming publication  | 16 |
| 2  | Publications in non-refereed journals, books and book chapters, and other publications | 18 |
| 2.1  | Published in 2010  | 18 |
| 2.2  | Accepted for publication   | 20 |
| 3  | Working papers and occasional papers   | 21 |
| 3.1  | Working papers   | 21 |
| 3.2  | Occasional papers  | 23 |

## 1 Introduction

Analysis and economic research are essential in order for the Banco de España's to perform its functions. In 2010 various departments continued to carry out analysis and research on the Spanish economy and its international environment, with the fundamental aim of giving advice to the Bank's governing bodies in relation to the performance of these functions. Some of the results of these activities were the publication of 39 working papers, two occasional papers and 49 articles in academic journals or specialised books, 22 of which were in anonymously refereed international journals. These figures confirm the upward trend in economic analysis and research at the Banco de España during the second half of the 2000s.

This Memorandum describes the main avenues of research conducted in 2010 (Section 2), the Bank's relations with academia and services provided to other researchers (Section 3), and the scientific findings made in the year (Section 4). The content of these activities and a professional profile of the researchers involved may be consulted on the "Economic Research Portal" ([www.bde.es/investigador/home.htm](http://www.bde.es/investigador/home.htm)) on the Banco de España's institutional website.

## 2 Priority areas of analysis

The Banco de España's research agenda currently covers four main areas: i) macroeconomic modelling and forecasting; ii) monetary policy and its transmission mechanisms; iii) financial stability; and iv) the Spanish economy. During 2010 the priority area of analysis was the causes and consequences of the crisis and its implications for economic policy. In particular, special attention was paid to: studying the process of adjustment and recovery of the world economy and, more particularly, that of the euro area and Spain; improving the integration of financial and real economic factors in current macroeconomic analysis; analysing the optimal credit and debt of firms and households; identifying the determinants of the optimum size of the financial sector and its constituent institutions; looking at the inclusion of aspects of financial stability in the formulation of monetary policy; evaluating the role of fiscal policies in the current situation; examining the development of the sovereign debt crisis in certain European countries; gauging the effect of the crisis on the level and rate of potential growth; and determining structural policies suitable for promoting potential growth.

### MODELLING, FORECASTING AND ECONOMIC ANALYSIS TOOLS

In the field of macroeconomic modelling and forecasting, the main results obtained refer to the inclusion of expectations in the quarterly macroeconomic model for analysing and forecasting the Spanish economy, the development of general equilibrium models with rational agents for the simulation of fiscal measures in Spain, the extension of dynamic factor models to identify the "green shoots" or turning points in the main economic variables and the upgrading of tools for forecasting very-short-term economic activity. Regarding the tools of economic analysis, noteworthy at the end of 2010 was the release of the preliminary results of the Spanish Survey of Household Finances (EFF-2008) which provide a detailed approximation of the financial position of Spanish households and, therefore, more information for analysing their consumption and saving decisions.

Salient publications in this area refer to the findings of the factor models ("Introducing the euro-sting: Short-term indicator of euro area growth" by M. Camacho and G. Perez Quiros, published in the *Journal of Applied Econometrics*), which show that the results of forecasting quarterly short-term GDP in real time using a fully automated small-scale factor model

are comparable with the official forecasts of prestigious official institutions. Likewise, extensions of this work to non-linear models give good results in detecting the turning points in economic activity. In this same connection, also worth noting are the results of a short-term monitoring model of public finances and its practical application to monitoring current budget consolidation plans in Spain (“Short-term monitoring of the Spanish government balance” by T. Leal, D.J. Pedregal and J.J. Pérez, published in *SERIEs-Journal of the Spanish Economic Association*), and the version referring to the euro area as a whole, which is used as a forecasting tool at the ECB (“Should quarterly government finance statistics be used for fiscal surveillance in Europe?” by D.J. Pedregal and J.J. Pérez, published in the *International Journal of Forecasting*). The estimated general equilibrium model for the analysis of the Spanish economy and its relationship with the rest of the euro area (“Spain in the Euro: A General Equilibrium Analysis”, published in *SERIEs-Journal of the Spanish Economic Association*) should be underlined among the publications on macroeconomic models.

#### ANALYSIS OF MONETARY POLICY AND ITS TRANSMISSION MECHANISMS

The two main results in relation to the analysis of monetary policy and its transmission mechanisms relate to i) the analysis of optimal monetary policy when there are restrictions on indebtedness and monopolistic competition in the banking system, and ii) monetary policy implementation through possible changes to central banks’ deposit and lending facilities.

One very active avenue of research relating to monetary transmission has been the analysis of price behaviour in microeconomic data and its implications for macroeconomics. The main finding reported by publications in this connection is that microeconomic evidence of major heterogeneous price adjustments at company and product level is consistent with macroeconomic evidence of the substantial real effects of monetary shocks. This conclusion (see in particular the article by L.J. Álvarez and P. Burriel in *B.E. Journal of Macroeconomics (Advances)*, recipient of the 2010 Arrow Prize for Senior Economists, and that by J. Costain and A. Nakov in *Journal of Money, Credit and Banking*) strengthens confidence in the modelling of nominal rigidities in the macroeconomic models used by the Banco de España. Similarly, several publications have just been released which analyse microeconomic evidence of wage adjustments and their implications for the macroeconomy and monetary policy (see, for example, G. de Walque et al. in the *Journal of the European Economic Association*).

#### STABILITY AND EFFICIENCY OF THE FINANCIAL SYSTEM

In 2010 research on financial stability and analysis of the international financial system continued to focus on various aspects of the crisis and on regulatory measures designed to reduce the likelihood and impact of such crises. Research began on counterparty risk analysis, work advanced on the different mechanisms for mitigating procyclicality in a risk-sensitive regulatory framework, various aspects of stress-testing methodology were addressed and progress continued in the analysis of the role of competition in risk taking. Other topics addressed were the analysis of the international capital flows, global imbalances and the risk diversification associated with financial integration, and of the determinants of sovereign risk and financial crises (see, for example, “Measuring and Explaining the Volatility of Capital Flows toward Emerging Countries” by C. Broto, J. Díaz-Cassou and A. Erce published in *Journal of Banking and Finance*).

The research undertaken in this area is particularly relevant against the backdrop of the current process of regulatory reform of the international financial system. Thus, for example, the article “Do Dynamic Provisions Reduce Income Smoothing Using Loan Loss Provisions?” (D. Pérez, V. Salas-Fumás and J. Saurina) underlines the role played by dynamic provisions in Spain during the 2000-2004 period in the smoothing of banks’ income and

the article “Cross-Border Coordination of Prudential Supervision and Deposit Guarantees” (D. Hardy and M.J. Nieto) studies the optimal design of macroprudential supervision in the context of an integrated banking system such as that of the European Union.

#### THE SPANISH ECONOMY

Lastly, research on the Spanish economy covered two major subject areas. Firstly, the adjustment of the Spanish economy and its determinants have been researched in greater depth, paying particular attention to the impact of institutional and structural characteristics (the labour market, demography and business structure, openness to foreign trade, real estate sector). Secondly, research examined the rationale for economic policy recommendations in different areas (fiscal policy, structural policy) and evaluating their macroeconomic impact.

The noteworthy results in this area are described below. Firstly, the microeconomic data from the Spanish Survey of Household Finances were used to document the link between household structure and the distribution of wealth, which is particularly important for analysing the financial position of Spanish households (“Wealth Inequality and Household Structure: US vs. Spain”, by O. Bover, published in the *Review of Income and Wealth*). Secondly, the macroeconomic effects of immigration in Spain were analysed using a multi-generational general equilibrium model which takes into account in great detail demographic changes and the breakdown by age and nationality of the labour force (“On the Aggregate effects of immigration in Spain” by M. Izquierdo, J.F. Jimeno and J.A. Rojas, published in *SERIEs-Journal of the Spanish Economic Association*). Lastly, the consequences of Spain’s dual (temporary versus indefinite employment) labour market on the cyclical volatility of employment were analysed, showing that the intensive use of temporary contracts markedly contributes to amplifying cyclical fluctuations in employment in the face of macroeconomic shocks (“Employment fluctuations in a dual labour market” by James Costain, Juan F. Jimeno and Carlos Thomas, Working Paper no. 1013).

### 3 Relations with academia

The Banco de España’s connections with academia and with the economic analysis and research units at other central banks and international institutions were maintained through the four traditional channels. First, the analysis and research produced by the Banco de España was presented and discussed at national and international seminars, congresses and academic conferences, and published through the profession’s usual channels. Second, the Banco de España organises several series of seminars, in which members of the Spanish and international academic community participate, including a weekly economic research seminar. As regards scientific meetings, in 2010 the Banco de España organised, or participated with other institutions in the organisation of, five international conferences:

- 1 Financial Globalization: Shifting Balances
- 2 Second IJCB Financial Stability Conference. The Theory and Practice of Macro-Prudential Regulation.
- 3 European Summer Symposium in International Macroeconomics (ESSIM) 2010.
- 4 High-level Seminar on Labour Market Experiences: towards more Efficient Labour Markets.
- 5 Interactions between Monetary and Fiscal Policies

The Bank also sponsored sessions at academic conferences, such as those of the European Economic Association and the Latin American and Caribbean Economic Association. Third, the Banco de España continued to contribute to research networks, both within the Eurosystem for analysis of the euro area economy, such as that set up to work on macroprudential regulation, and in Latin America, such as that set up in CEMLA. The Bank also maintains its regular visitor and external adviser programmes, which promote projects that may be considered strategic in different areas of analysis and research. Lastly, 2010 saw the second edition of the *Programa de excelencia en educación e investigación en economía monetaria, financiera y bancaria* (Programme for excellence in monetary, financial and banking economics education and research) aimed at promoting excellence in teaching and research in the areas of macroeconomics, monetary policy, finance, financial system supervision and international economics, through the establishment of cooperation agreements with universities and research centres to secure grants for recruiting teaching and research staff and for undertaking research projects.

### 3.1 SERVICES PROVIDED TO THE RESEARCH COMMUNITY

#### 3.1.1 Statistics

##### a Principal regular statistical products

In addition to its interaction with the research community through the habitual channels (publications, seminars, conferences, etc.), the Banco de España provides other services and products of value for research, including most notably: i) statistics; ii) statistical and econometric software; and iii) training courses.

The Banco de España regularly publishes a wide range of statistics, the most important of which are: i) the Financial Accounts of the Spanish Economy; ii) monetary and financial statistics; iii) balance of payments and international investment position statistics; and iv) statistics from the Central Balance Sheet Data Office. With the exception of the latter, all are included in the Spanish National Statistics Plan.

The Financial Accounts of the Spanish Economy (FASE) are prepared following the guidelines of the European System of Accounts (ESA 95). They include detailed information on financial instruments, classified into accounts of resident institutional sectors and sub-sectors, and a rest of the world account. For each of these institutional groupings, balance sheet and transaction accounts are produced, in addition to less detailed revaluation accounts and accounts of other changes in the volume of assets. The homogeneous series of FASE starts in 1980 (for the annual series) and in 1990 (for the quarterly series). The accounts are published on the website (<http://www.bde.es/estadis/ccffe/cfcap2e.htm>) with a lag of 120 days.

The production of monetary and financial statistics acquired a new dimension in 1998 further to the establishment of European Economic and Monetary Union (EMU). Under the new arrangements for the production of euro-area harmonised statistics, new monthly series on retail bank interest rates and a quarterly bank lending survey began to be disseminated in 2003. Monthly series of credit institutions' balance sheet data drawn from supervisory returns are available from 1962, and monthly series of the balance sheets of the Monetary Financial Institutions sector from 1980. These statistics are available for consultation at [www.bde.es/infoest/boleste.htm](http://www.bde.es/infoest/boleste.htm).

The balance of payments and international investment position statistics include other statistics likewise compiled by the Banco de España, namely international reserves and foreign currency liquidity, and external debt. They also incorporate the foreign trade statistics prepared by the State Tax Revenue Service. The balance of payments and international investment position statistics follow the methodological guidelines of the IMF Balance of Payments Manual (Fifth Edition, 1993) and their conceptual framework is very



similar to that of the National Accounts rest of the world accounts (including the accounts of financial transactions, financial stocks, revaluations and other changes in the volume of assets for this sector included in the FASE). These statistics can be found at [www.bde.es/bpagos/bpagose.htm](http://www.bde.es/bpagos/bpagose.htm).

Since the early 1980s, the Central Balance Sheet Data Office (CBSO) has provided data on the financial and net worth position and earnings of non-financial corporations resident in Spain, based on the information available in their accounting records. The CBSO maintains an annual database (CBA), which relies on the collaboration of more than 8,000 firms that complete a highly detailed questionnaire, and a quarterly database (CBQ), which draws on a substantially shorter questionnaire completed by over 800 large corporations. The CBSO has another database that includes over 25,000 companies, based on the mandatory accounts filed by Spanish companies with the Mercantile Registers of Spain. The full coverage of the three CBSO databases is close to 50% of the gross value added of the non-financial corporations sector. The annual and quarterly results can be found at [www.bde.es/cenbal/cenbale.htm](http://www.bde.es/cenbal/cenbale.htm).

#### b Survey of Household Finances

The Spanish Survey of Household Finances (“EFF” by its Spanish abbreviation) is a new survey conducted by the Banco de España that is included in the National Statistics Plan. The main aim of the EFF is to obtain detailed information on Spanish households’ wealth and financial decisions. The EFF is the only statistical source in Spain that allows the incomes, assets, debt and consumption of each household unit to be linked. It was launched in 2001 and the results for the first wave were released at end-2005. Preliminary results for the second wave (EFF-2005) were published at end-2007 and, in December 2008, following completion of the imputation process, the final results were published. These are made available subject to the same conditions as the results of the first wave; the results of both waves can be found on the website at <http://www.bde.es/webbde/en/estadis/eff/eff.html>. Preparation of the third wave (EFF-2008) is now under way; the preliminary results were published in the Banco de España’s Economic Bulletin in December 2010.

#### 3.1.2 Statistical and econometric software

Several tools for statistical analysis of time series are made freely available to users. These are new versions of the programs TRAMO (Time series Regression with ARIMA noise, Missing values and Outliers) and SEATS (Signal Extraction in ARIMA Time Series), documented in Banco de España Working Papers No. 9628 and No. 9805 by V. Gómez and A. Maravall, of the program TERROR (TRAMO for Errors) and of the program TSW, a Windows version of these programs, with some modification and additions, developed by G. Caporello and A. Maravall at the Banco de España (see Occasional Paper No. 0301 and Working Paper No. 0408).

The essential aim of the programs is to analyse monthly or lower frequency time series. Although structured to meet the needs of expert analysts, they can be reliably used in an entirely automatic manner on very large sets of time series. The main applications are forecasting, seasonal adjustment, trend-cycle estimation, construction of leading indicators, interpolation, detection and correction of outliers, estimation of special effects and data quality control.

These programs, together with the program X12-ARIMA of the US Census Bureau (USCB), are recommended for statistical treatment, and in particular seasonal adjustment, of series within the European Statistical System (ESS), which includes central banks and statistical institutes. A collaboration agreement between the Banco de España, the European Central Bank, the Na-

tionale Bank van België/Banque Nationale de Belgique, Eurostat and the US Census Bureau is in place to develop a project (DEMETRA+) to combine X12-ARIMA and TRAMO-SEATS. This includes the complete reprogramming of both programs in a “.net” language and the creation of an interface with both programs that may be used virtually in any database on any platform.

The Bank is also collaborating with the USCB on the development of its new program, X13-ARIMA-SEATS, which incorporates the methodology for automatic identification of TRAMO models and the program SEATS as an alternative to X12. The aim is for X13-ARIMA-SEATS and Demetra+ to become the official programs in the United States and European countries, and very probably in most other countries (in fact this is already the case with X12-ARIMA and TRAMO-SEATS).

### 3.1.3 Training courses

In 2010 the following training courses were conducted on TRAMO (Time series Regression with ARIMA noise, Missing values and Outliers) and SEATS (Signal Extraction in ARIMA Time Series):

- 1 Ministry of Housing, Madrid.
- 2 Instituto de Estudios Fiscales, Madrid,
- 3 Eurostat, Luxembourg.
- 4 University of Stockholm, Stockholm.

### 3.2 SEMINARS AND CONFERENCES

A total of 33 external seminars given by national and international academic researchers were held in 2010:

#### 3.2.1 Economic research seminars

|          |   |
|----------|---|
| 15/12/10 | Tamon Asonuma (International Monetary Fund): Serial Default and Debt Renegotiation  |
| 01/12/10 | Luca Onorate (European Central Bank): Inflation and Inflation Uncertainty in the Euro Area  |
| 24/11/10 | Hafedh Bouakez (Bank of Canada): Measuring the Effects of Fiscal Policy   |
| 17/11/10 | Tano Santos (Columbia University): Is the Financial Sector too Big?   |
| 10/11/10 | Huixin Bi (Bank of Canada): Sovereign Default Risk Premia, Fiscal Limits, and Fiscal Policy   |
| 3/11/10  | Riccardo DiCecio (Federal Reserve Bank of St. Louis): Entry Costs, Industry Structure, and Cross-Country Income and TFP Differences |
| 26/10/10 | Óscar Jordá (University of California, Davis): Performance Evaluation of Zero Net-Investment Strategies                             |
| 20/10/10 | Fernando García (Universidad Autónoma de Madrid): Young Unemployment, Labour Market Institutions and Educational Systems            |
| 8/10/10  | Carlos Carvalho (Federal Reserve Bank of New York): Sectoral Price Facts in a Sticky-Price Model                                    |

- 29/9/10 Leonardo Gambacorta (Bank for International Settlements): Securitization is not Evil after all
- 22/9/10 Pedro Teles (Banco de Portugal): Policy at the Zero Bound
- 15/9/10 Kevin Sheedy (London School of Economics): Robustly Optimal Monetary Policy
- 8/9/10 Stefania d'Amico (Federal Reserve Board): Flow and Stock Effects of Large-Scale Treasury Purchases
- 7/7/10 David Marqués (European Central Bank): Does Monetary Policy affect bank risk-taking?
- 1/7/10 Carmen Reinhart (University of Maryland): From Financial Crash to Debt Crisis
- 23/6/10 Marco Taboga (Banca d'Italia): The Riskiness of Corporate Bonds
- 16/06/10 Antti Ripatti (Bank of Finland): Non-Causal Inflation
- 11/6/10 María José Luengo-Prado (Northeastern University): Consumption, Retirement and Life-cycle Prices: Evidence from Spain
- 9/6/10 Sanjay Nawalkha (University of Massachusetts): Managing Interest Rate Risk: The Next Challenge?
- 24/5/10 Miguel Leon-Ledesma (University of Kent): Shocking Stuff: Technology, Hours and Factor Substitution
- 19/5/10 Andrew Harvey (University of Cambridge): Modeling the Phillips Curve with Unobserved Components
- 18/5/10 John Knowles (University of Southampton): Marriage, Fertility and Step-Families: An Equilibrium Analysis
- 12/5/10 Silvana Tenreyro (LSE): Hot and Cold Seasons in the Housing Market
- 28/4/10 Andrew Benito (Bank of England): Labour Supply as a Buffer: Evidence from UK Households
- 21/4/10 Mario Centeno (Banco de Portugal): Is Unemployment Insurance a Life Vest of Re-employment Wages? Treatment Effects Evidence
- 14/4/10 Agustín Pérez Barahona (INRA and École Polytechnique): Life Expectancy and the Environment
- 9/4/10 Mary Barth (Stanford): How did Financial Reporting Contribute to the Financial Crisis?
- 7/4/10 Jesús Crespo (Vienna University of Economics and Business): When do House Price Bubbles Burst?

|         |   |
|---------|---|
| 26/3/10 | Andreas Fischer (Swiss National Bank): European Hoarding: Currency use among immigrants in Switzerland                                      |
| 17/3/10 | Michael Owyang (Federal Reserve Bank of St. Louis): The Propagation of regional Recessions  |
| 10/3/10 | Francesco Caprioli (Banca d'Italia): Optimal Fiscal Policy when Agents fear Government Default  |
| 3/3/10  | Henrique Basso (Uppsala University): Lending Relationships and Monetary Policy  |
| 21/1/10 | George Kaufman (Loyola University, Chicago): The U.S. Response to the S+L Crisis of the 1980s. What It Did, Why It Failed, and Where to Now |

### 3.2.2 Conferences

During 2010 the following international conferences were organised:

- 1 INTERACTIONS BETWEEN MONETARY AND FISCAL POLICIES, Madrid, 25 and 26 February 2010.
- 2 HIGH-LEVEL SEMINAR ON THE LABOR MARKET EXPERIENCES: TOWARDS MORE EFFICIENT LABOR MARKET, Madrid, 11 May 2010.
- 3 18th CEPR EUROPEAN SUMMER SYMPOSIUM IN INTERNATIONAL MACROECONOMICS (ESSIM), Roda de Bará, 25 to 28 May 2010.
- 4 SECOND IJCB FINANCIAL STABILITY CONFERENCE: THE THEORY AND PRACTICE OF MACROPRUDENTIAL REGULATION, Madrid, 17 and 18 June 2010.
- 5 FINANCIAL GLOBALIZATION: SHIFTING BALANCES, Madrid, 1 and 2 July 2010.

And in collaboration with other institutions:

- 1 ECONOMIC POLICY PANEL, Madrid 23 and 24 April 2010.
- 2 FEDEA 25th ANNIVERSARY COMMEMORATION, Madrid 10 November 2010.

## 4 Publications

The research findings of Banco de España staff are disseminated via the Working Papers and Occasional Papers series of the Banco de España, and as articles or book chapters through the usual professional outlets. Table 1 summarises the total number of articles published over the period 2007-2010, along with those accepted for future publication in each year. As the table shows, in 2010 the rate of production of Working Papers and Occasional Papers was similar to that observed in the preceding three years<sup>1</sup>. Working Papers, which are published subject to an anonymous referee process,

<sup>1</sup> All Working Papers and Occasional Papers and all external publications are listed in the Appendix.

SUMMARY OF PUBLICATIONS IN 2007-2010

|                               | 2007      |                          | 2008      |                          | 2009      |                          | 2010      |                          |
|-------------------------------|-----------|--------------------------|-----------|--------------------------|-----------|--------------------------|-----------|--------------------------|
|                               | Published | Accepted for publication | Published | Accepted for publication | Published | Accepted for publication | Published | Accepted for publication |
| Articles in refereed journals | 26        | 24                       | 34        | 28                       | 26        | 27                       | 22        | 30                       |
| Other publications            | 35        | 10                       | 27        | —                        | 33        | 2                        | 27        | 11                       |
| Working Papers                | 41        | —                        | 38        | —                        | 35        | —                        | 39        | —                        |
| Occasional Papers             | 6         | —                        | 10        | —                        | 5         | —                        | 2         | —                        |

SOURCE: Banco de España.

totalled 38 and there were two Occasional Papers. As for external publications in anonymously-refereed academic journals, the numbers were similar to previous years, with 20 publications in 2010

|  |   |   |
|--|---|---|
| <b>Appendix: list of external publications in 2010</b> | 1 | “A Characterization of the Judicial System in Spain: Analysis with Formalism Indices” (J.S. Mora-Sanguinetti), <i>Economic Analysis of Law Review</i> 1 (2), pp. 210-240.   |
| <b>1 Publications in anonymously-refereed journals</b> | 2 | “A new approach to measuring competition in the loan markets of the euro area” (M. van Leuvenstelin, J.A. Bikker, A. Van Rixtel and C. Kok-Sørensen), <i>Applied Economics</i> , October 2010, pp. 1-13.  |
| 1.1 PUBLISHED IN 2010                                  | 3 | “Booms and busts in China’s stock market: Estimates based on fundamentals” (G.J. de Bondt, T.A. Peltonen and D. Santabárbara), <i>Applied Financial Economics</i> , January 2011, pp.1-14.  |
|  | 4 | “Do Dynamic Provisions Reduce Income Smoothing Using Loan Loss Provisions?” (D. Pérez, V. Salas-Fumás and J. Saurina), <i>Moneda y Crédito</i> , 230, pp. 167-197.  |
|  | 5 | “Employment fluctuations with downward wage rigidity: the role of moral hazard” (J. Costain and M Jansen), <i>Scandinavian Journal of Economics</i> , 112 (4), pp. 782-811.   |
|  | 6 | “Fiscal policy shocks in the euro area: an empirical assessment” (P. Burriel, F. Fernández de Castro, D. Garrote, E. Gordo, J. Paredes and J.J. Pérez), <i>Fiscal Studies</i> , 31 (2), pp. 251-285.  |
|  | 7 | “Introducing the euro-sting: Short-term indicator of euro area growth” (M. Camacho and G. Perez Quiros), <i>Journal of Applied Econometrics</i> , Volume 25, Issue 4, pp. 663-694.  |
|  | 8 | “Is a Calvo price setting model consistent with individual price data?” (L.J. Álvarez and P. Burriel), <i>The B.E. Journal of Macroeconomics (Advances)</i> : 10(1):13. Awarded the 2010 Arrow Prize for Senior Economists by the editors at Berkeley Electronic Press. |
|  | 9 | “Micro-based estimates of heterogeneous pricing rules: The United States vs. the euro area” (L.J. Álvarez and P. Burriel), <i>The Scandinavian Journal of Economics</i> , 112 (49), December, pp. 697-722.  |

- 10 “Mitigating the procyclicality of Basel II” (R. Repullo, J. Saurina and C. Trucharte), *Economic Policy*, 25 (64), October, pp. 659-702.
- 11 “Modelling Heterogeneity and Dynamics in the Volatility of Individual Wages” (L. Hospido), *Journal of Applied Econometrics*, published online July 2010, DOI: 10.1002/jae.1204.
- 12 “Modelling income processes with lots of heterogeneity” (M. Browning, M. Ejrnaes and J. Álvarez), *Review of Economic Studies*, 7 (4), October.
- 13 “Omitted Variables in the Measurement of a Labour Quality Index: the Case of Spain” (A. Lacuesta, S. Puente and P. Cuadrado). *Review of Income and Wealth*, 57(1), pp 84-110.
- 14 “On the aggregate effects of immigration in Spain” (M. Izquierdo, J.F. Jimeno and J.A. Rojas), *SERIEs-Journal of the Spanish Economic Association*, 1(4), pp. 409-432.
- 15 “Price-setting behaviour in Spain: evidence from micro PPI data” (L.J. Álvarez, P. Burriel and I. Hernando), *Managerial and Decision Economics*, 31(2-3):105-121.
- 16 “Should quarterly government finance statistics be used for fiscal surveillance in Europe?” (D.J. Pedregal and J.J. Pérez), *International Journal of Forecasting*, 26, pp. 794-804.
- 17 “Spain in the euro: a general equilibrium analysis” (J. Andrés, S. Hurtado, E. Ortega and C. Thomas), *SERIEs: Journal of the Spanish Economic Association*, 1 (1). pp. 67-95.
- 18 “Some Macroeconomic and Monetary Policy Implications of New Micro Evidence on Wage Dynamics” (G. de Walque, M. Rause, J. F. Jimeno, H. Le Bihan, F. Smets and S. Millard), *Journal of the European Economic Association, Papers and Proceedings*, 8 (2-3), April, pp. 506-513.
- 19 “The incidence of nominal and real wage rigidity: an individual-based sectoral approach” (J. Messina, C. Duarte, P. du Caju, M. Izquierdo and N. Hansen), *Journal of the European Economic Association, Papers and Proceedings*, 8 (2-3), April, pp. 487-96.
- 20 “The relationship between house prices and house purchase loans: the Spanish case” (Ricardo Gimeno and Carmen Martínez Carrascal), *Journal of Banking and Finance*, 34, p.1849-1855.
- 21 “The usefulness of infra-annual government cash budgetary data for fiscal forecasting in Europe” (L. Onorante, D.J. Pedregal, J.J. Pérez and S. Signorini), *Journal of Policy Modeling*, 32, pp. 98-119.
- 22 “Wealth Inequality and Household Structure: US vs. Spain” (O. Bover), *Review of Income and Wealth*, 56, 2010, pp. 259-290.
- 1 “An assessment of the reform of the Spanish competition framework” (J.S. Mora-Sanguinetti and P. Hernández de Cos), *World Competition*

1.2 FORTHCOMING  
PUBLICATION

- 2 “Bayesian Posterior Prediction and Meta-Analysis: An Application to the Value of Travel Time Savings” (E. Moral-Benito), *The Annals of Regional Science*.
- 3 “Cross-Border Coordination of Prudential Supervision and Deposit Guarantees” (D. Hardy, M.J. Nieto), *Journal of Financial Stability*.
- 4 “Current Accounts in the Euro Area: An Inter-temporal Approach” (José Manuel Campa and Ángel Gavilán). *Journal of International Money and Finance*.
- 5 “Determinants of Economic Growth: A Bayesian Panel Data Approach” (E. Moral-Benito), *The Review of Economics and Statistics*.
- 6 “Distributional tests in multivariate dynamic models with normal and Student t innovations” (J. Mencía and E. Sentana), *Review of Economics and Statistics*.
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### 3 Working papers and occasional papers

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