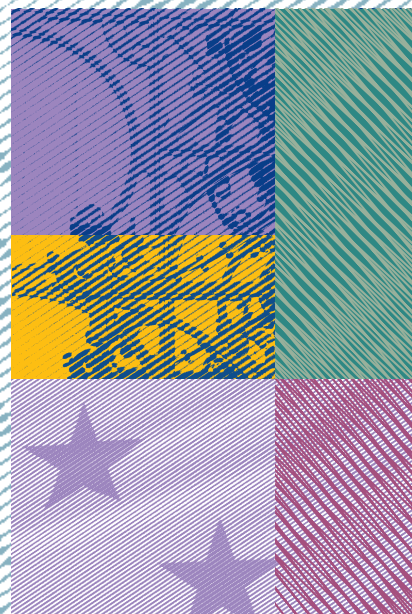


RESEARCH MEMORANDUM

2009

BANCO DE **ESPAÑA**
Eurosistema



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1 Introduction

The main goals of the research activities conducted in the Banco de España are to help define its institutional position on economic policy matters, providing quality analysis, and to foster economic research in fields related to the responsibilities of the Banco de España. These research activities are conducted in parallel with regular monitoring of the Spanish, euro area and international economies, evaluation of economic policies, financial regulation and supervision, and compilation of statistics.

This Memorandum describes the main avenues of research conducted in 2009 (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) on the Banco de España's institutional website.

2 Priority areas of analysis

The Banco de España's research agenda covers five main areas: i) macroeconomic modelling and forecasting; ii) monetary policy and its transmission mechanisms; iii) financial stability; iv) international economics; and v) the Spanish economy. During 2009 a common link between all these areas was the analysis of the relationships between the real and the financial sectors of the economy, aiming to identify the causes and consequences of the financial crisis and to assess the possible measures to address it.

MODELLING, FORECASTING AND ECONOMIC ANALYSIS TOOLS

In the field of macroeconomic modelling and forecasting, work continued on developing real-time forecasting models and the BEMOD (the Banco de España's dynamic stochastic general equilibrium – DSGE – model), incorporating institutional elements of the Spanish economy and making applications to be used to assess economic policy measures. An overlapping generations model calibrated to the Spanish economy was also developed, to analyse the impact of fiscal policy and structural reform, and to assess the macroeconomic consequences of the different strategies for exiting the present downturn.

Among the extensions of real-time forecasting models, the design of a dynamic factor model to predict GDP growth in the Spanish economy was completed. Also, in connection with economic fluctuations, the changes witnessed in the characteristics of the cyclical phase that follows a recession were analysed, relating these changes to the "Great Moderation". Regarding extensions and applications of the BEMOD, this model was used to analyse the determinants of macroeconomic fluctuations in the Spanish economy since the introduction of the euro and to identify the sources of the differences between the Spanish and euro area inflation rates. Simplified versions of DSGE models were also made to analyse the consequences of interactions between the public and private sectors in connection with the transmission of economic shocks and to explicitly incorporate processes of technological innovation and adoption into these models. In the microeconomic field, progress was made in modelling wage dynamics, explicitly incorporating employment flows.

Lastly, regarding the design of economic analysis tools, in 2009 data collection for the third wave of the Spanish Survey of Household Finances (Encuesta Financiera de las Familias, EFF-2008) was completed and preparation of this wave, whose first preliminary results will be available at the end of 2010, was begun. Work also continued on extension and maintenance of the programs TRAMO and SEATS. In the recent *ESS Guidelines on Seasonal Adjustment*, Eurostat recommended that the bodies of the European Statistical System (ESS) use these programs.

ANALYSIS OF MONETARY POLICY
AND ITS TRANSMISSION
MECHANISMS

Progress was made here on three fronts. First, the consequences of imperfect competition in the banking sector and of several financial constraints on optimal monetary policy were analysed. Second, studies were conducted on the impact of interest rate fluctuations on oil prices and, in general, on the effects of different shocks on oil prices and the possible monetary policy response. And third, using the empirical findings of the Eurosystem's Wage Dynamics Network, estimates and alternative calibrations of several versions of general equilibrium models were made to assess different monetary policy rules.

Thus, the existence of collateral constraints and imperfect competition in the banking sector were the financial frictions considered in the analysis of monetary policy transmission. Collateral constraints were also analysed in the context of a multi-country model with different financial and real estate markets, and with respect to the different level of prevalence of fixed and floating-rate loans. Other factors studied in connection with the effects of monetary policy were the term structure of interest rates, nominal wage rigidities, and job destruction and hiring costs. Lastly, with regard to the oil market, the strategic behaviour of oil producers was modelled, to identify the determinants of oil price fluctuations, including the effects of changes in interest rates.

STABILITY AND EFFICIENCY OF
THE FINANCIAL SYSTEM

In 2009, research on financial stability and banking analysis focused largely on issues that could shed light on different aspects connected with the crisis. Thus, in-depth analysis continued on the role played by banking relationships in the changes in a firm's financial position. This was accompanied by research on the impact of the macroeconomic setting, the level of capitalisation and bank liquidity on the granting of credit, the role of securitisations in the development of the credit market and the factors behind changes in the aggregate doubtful assets ratio. There was also in-depth analysis of how banks react to changes in market interest rates.

Continuing with research projects from previous years, further analysis was conducted into: mergers and acquisitions and the role the availability of external funding plays in these processes, the distribution of bank loans in cases where there is credit risk and no arbitrage opportunities; and the determinants of the term structure of interest rates where there is risk aversion and no arbitrage opportunities.

INTERNATIONAL ECONOMICS
AND FINANCE

In the area of research connected with the economy and the international financial markets, the impact and consequences of the crisis on key economic variables and relationships also gradually came to the fore. Thus, research topics included the fiscal consequences of the crisis from a global perspective, its effects on gross and net capital flows between countries, international lending and trade flows, the different impact of the crisis across regions (particularly across emerging markets) and the determinants of the increase in sovereign and corporate risk. Moreover, parallel avenues of research were embarked upon or continued in modelling and empirical studies. On the empirical front, contributions were made on the assessment of inflation-targeting regimes in emerging countries and on the relationship between risk and selective bankruptcies. As regards the financial markets, progress was made in extracting market expectations from euro-area and US government bond prices.

In connection with the euro area, the macroeconomic impact of fiscal policies was analysed, using a new quarterly database. Regarding labour markets in the euro area, the interaction between public and private sector pay and the combined impact of employment protection legislation and financial market imperfections on employment reallocation and productivity were studied. The implications of the creation of the euro for the economic fluctuation dynamics of the euro area countries were identified. The determinants of investment in liquid assets

by non-financial corporations and the connection with the existence of financial constraints were also studied. As regards emerging countries, the determinants of bank profitability in China and the effects of human capital accumulation on emigration were studied.

THE SPANISH ECONOMY

Lastly, research on the Spanish economy covered a wide range of issues connected with the adjustment in the residential market and characterisation of the real estate cycle (relating both to activity and to cycles in other countries), the characteristics of export firms, the level of competition in the economy, analysis and the macroeconomic effects of fiscal policy, business momentum, the impact of R&D, immigration and the labour market, and the pensions system.

Among the aspects of the Spanish economy analysed in 2009, the following are particularly noteworthy: the impact of the risk of unemployment on consumption decisions and the existence of Ricardian effects in these decisions; retirement decisions and how Social Security benefits encourage such decisions; the characteristics and determinants of the deviations between State budget initial and final public revenue and expenditure figures and modelling of the main components of the central government, Social Security and territorial government budgets; the cyclical nature of investment in R&D&I, its impact on economic growth and optimal policy characteristics in markets with product differentiation; the determinants of the dynamics of business start-ups and failures, with special focus on growth at newly-created firms; the effects of retail trade regulations on prices, employment and productivity; profit margin trends by sector of activity; and the assimilation of immigrants.

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. During the year the Bank also sponsored sessions at academic conferences, such as the Congress of the European Economic Association (Barcelona, 23-27 August) and the LAMES-LACEA Meetings (Buenos Aires, 1-3 October). Third, the Banco de España continued to contribute to research networks within the Eurosystem for analysis of the euro area economy, including, inter alia, since 2007, the Wage Dynamics Network and, for Latin America, CEMLA. Lastly, 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. All these activities are included in the Economic Research Portal, a section on the Bank's website whose content was extended and amplified in 2009.

3.1 SERVICES PROVIDED TO THE RESEARCH COMMUNITY

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.

3.1.1 Statistics

a. Principal regular statistical products

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 (CBSO). 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.

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.

Since the early 1980s, the 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. It 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.

b. Survey of Household Finances

The Spanish Survey of Household Finances (EFF) 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 (EFF-2002) 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 were made available on 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/estadis/eff/effe.htm>. Preparation of the third wave (EFF-2008) is now under way; the preliminary results will be published in December 2010 at the latest.

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, the program TERROR (TRAMO for Errors) and 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 Nationale Bank van België/Banque Nationale de Belgique, Eurostat and the USCB 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 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 being for X13-ARIMA-SEATS and Demetra+ to become the official programs in the United States and Europe, 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 2009 the following training courses were conducted on Applied Time Series Analysis and TRAMO-SEATS:

- 1 Eurostat, a course imparted, once or twice a year, within the European Statistical Training Program. Luxembourg, April.
- 2 Banco de España, Training Centre. June.
- 3 Central Bureau of Statistics. The Hague, November.
- 4 Office for National Statistics. Newport (UK), October.
- 5 US Census Bureau and BLS. Washington DC, August.

3.2 SEMINARS AND CONFERENCES

3.2.1 Economic research seminars

A total of 38 external seminars given by national and international academic researchers were held in 2009:

- 28.1.2009 Ana Lamo (ECB): *How are Firms' Wages and Prices Linked: Survey Evidence in Europe.*
- 11.2.2009 Francesc Ortega (UPF): *The Short-run Effects of a Large Immigration Wave: Spain 1998-2008.*

- 18.2.2009 Javier Suárez (CEMFI): *The Procyclical Effects of Basel II.*
- 25.2.2009 Itai Agur (De Nederlandsche Bank): *Centralization versus Decentralization of the Lender of Last Resort.*
- 4.3.2009 Huberto Ennis (Universidad Carlos III): *A Model of Stigma in the Fed Funds Market.*
- 11.3.2009 Salvador Barrios (European Commission): *International Taxation and Multinational Firm Location Decisions.*
- 18.3.2009 Michael McAleer (University of Western Australia): *The Ten Commandments for Optimizing Value-at-Risk and Daily Capital Charges.*
- 25.3.2009 Ghazala Azmat (UPF): *The Importance of Relative Performance Feedback Information: Evidence from a Natural Experiment using High School Students.*
- 1.4.2009 Jos van Bommel (Saïd Business School, University of Oxford): *The Governance of Financial Intermediaries.*
- 14.4.2009 Carlos Garriga (Saint Louis Fed): *Subprime Crises and Bail-out Programs.*
- 15.4.2009 Marco Leonardi (University of Milan): *Sources of Earnings Instability: Estimates from an On-the-Job Search Model of the US Labor Market.*
- 22.4.2009 Luis Garicano (LSE): *The Distinct Effects of Information Technology and Communication Technology on Firm Organization.*
- 30.4.2009 Todd Clark (Kansas Fed): *Nested Forecast Model Comparisons: A New Approach to Testing Equal Accuracy.*
- 6.5.2009 Jens Hagendorff (University of Leeds): *The Impact of European Bank Mergers on Bidder Default Risk.*
- 13.5.2009 John Romalis (University of Chicago): *The Welfare Implications of Rising Price Dispersion.*
- 14.5.2009 Gara Afonso (New York Federal Reserve): *Systemic Risk and Liquidity in Payment Systems.*
- 20.5.2009 Oleksiy Kryvtsov (Bank of Canada): *Inventories, Markups, and Real Rigidities in Menu Cost Models.*
- 27.5.2009 Mark Wright (UCLA): *The Recovery Before Redemption: A Theory of Delays in Sovereign Debt Renegotiations.*
- 3.6.2009 Olga Gorbachev (University of Edinburgh): *Did household consumption become more volatile?*
- 8.6.2009 John Duca (Dallas Fed): *House Prices and Credit Constraints: Making Sense of the US Experience.*

- 10.6.2009 Tommaso Monacelli (Bocconi): *Fiscal Policy, Wealth Effects and Markups* (joint with Roberto Perotti).
- 17.6.2009 Emmanuel Farhi (Harvard): *Collective moral hazard, maturity mismatch and systemic bailouts*.
- 24.6.2009 Michael Golosov (MIT): *Decentralized Trading with Private Information*.
- 15.7.2009 Manuel Santos (ITAM): *Long-Term Asset Price Volatility and Macroeconomic Fluctuations*.
- 9.9.2009 Ismael Sanz (Universidad Rey Juan Carlos): *The Growth Effects of Corporate and Personal Tax Rates in the OECD*.
- 16.9.2009 Neeltje van Horen (De Nederlandsche Bank): *The crisis as a wake-up call. Do banks tighten lending standards during a financial crisis?*
- 23.9.2009 Jesús Gonzalo (Universidad Carlos III): *Permanent and Transitory Shocks (Can We Identify and Test Them? Yes, We Can)*.
- 7.10.2009 Nuria Rodríguez (UAB): *The Part-Time Pay Penalty in a Segmented Labor Market*.
- 14.10.2009 Joachim Voth (UPF and CREI): *Lending to the Borrower from Hell: Debt and Default in the Age of Philip II, 1556-1598*.
- 21.10.2009 Hamish Low (University of Cambridge): *Disability Risk, Disability Insurance and Life-cycle Behaviour*.
- 28.10.2009 David Dorn (CEMFI): *Inequality and Specialization: The Growth of Low-Skill Service Jobs in the United States*.
- 4.11.2009 Irma Clots (Universidad Carlos III): *The Effect of Birthright Citizenship on Parental Integration Outcomes*.
- 11.11.2009 Elena del Rey (Universitat de Girona): *Loans, Insurance and Failures in the Credit Market for Students*.
- 18.11.2009 Guido Sandleris (Univ. Torcuato di Tella): *The Costs of Emerging Market Financial Crises: Output, Productivity and Welfare*.
- 25.11.2009 Thomas Laubach (Goethe University Frankfurt): *Learning and the Role of Macroeconomic Factors in the Term Structure of Interest Rates*.
- 2.12.2009 Alfonso Rosolia (Banca d'Italia): *Schooling and Youth Mortality: Learning from a Mass Military Exemption*.
- 9.12.2009 S. Gomes (Banco de Portugal) and P. Jacquinot (ECB): *Macroeconomic Implications of Greater Competition in the Euro Area*.
- 16.12.2009 Ugo Panizza (UNCTAD): *International Evidence on Recovery from Recessions*.

Conferences organised in 2009:

- 1 *Workshop on Monetary Policy*. Madrid, 26 February 2009.
- 2 *Conference 10th Anniversary of Spain's entry into the euro area*. Madrid, 27 February 2009.
- 3 *Estimation and Empirical Validation of Structural Dynamic Stochastic Models for the Spanish Economy*. Madrid, 13 March 2009.
- 4 *Conference on Procyclicality and the Role of Financial Regulation*. Madrid, 4 May 2009 (organised jointly with the BIS).
- 5 *Challenges in Banking Research*. 28 & 29 May 2009.
- 6 *COSME Workshop* (Committee on the Status of Women in Economics). Madrid, 1 & 2 June 2009.
- 7 *First EFIGE Annual Scientific Workshop and Policy Conference*. 1 to 3 June 2009.
- 8 *Roundtable on International Trade Finance*. 3 June 2009.
- 9 *Reforming Financial Regulation and Supervision: Going Back to Basics*. 15 June 2009.
- 10 *Conference on Household Finance and Macroeconomics*. Madrid, 15 & 16 October 2009.

Conferences planned to date for 2010:

- 1 *Interactions Between Monetary and Fiscal Policies*. Madrid, 25 & 26 February 2010.
- 2 *Economic Policy Panel*. Madrid, 23 & 24 April 2010.
- 3 *High-Level Seminar on Labour Market Experiences: Towards More Efficient Labour Markets*. Madrid, 11 May 2010.
- 4 *18th CEPR European Summer Symposium In International Macroeconomics (ESSIM)*. Roda de Bará (Spain), 25 to 28 May 2010.
- 5 *Second IJCB Financial Stability Conference: The Theory And Practice of Macroprudential Regulation*. Madrid, 17 & 18 June 2010.
- 6 *Financial Globalization: Shifting Balances*. Madrid, 1 & 2 July 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 2006-2009, along with those accepted for future publication in each year. As the

	2006		2007		2008		2009	
	Published	Accepted for publication	Published	Accepted for publication	Published	Accepted for publication	Published	Accepted for publication
Articles in refereed journals	27	25	26	24	34	28	26	27
Other publications	40	14	35	10	27		33	2
Working Papers	39		41		38		35	
Occasional Papers	8		6		10		5	

table shows, in 2009 the rate of production of Working Papers and Occasional Papers was similar to that observed in the preceding three years.¹ Working Papers, which are published subject to an anonymous referee process, totalled 35 and there were five Occasional Papers. As for external publications in anonymously-refereed academic journals, the numbers were similar to previous years, with 26 publications in 2009 and 27 accepted for future publication.

APPENDIX: List of external publications in 2009

1 Publications in anonymously-refereed journals

1.1 PUBLISHED IN 2009

- 1 "A genetic algorithm estimation of the term structure of interest rates" (Ricardo Gimeno and Juan M. Nave), *Computational Statistics and Data Analysis*, 53, pp. 2235-2250.
- 2 "Alternatives to initialize the Parameterized Expectations Algorithm" (Javier J. Pérez and A. Jesús Sánchez), *Economic Letters*, 102, pp. 116-118.
- 3 "Assimilation of immigrants in Spain: A longitudinal analysis" (Mario Izquierdo, Aitor Lacuesta and Raquel Vegas), *Labour Economics*, 16, pp. 669-678.
- 4 "Bankruptcy and reorganization procedures for cross-border banks in the EU: Towards an integrated reform of the EU safety net" (G. H. García, R. M. Lastra and M. J. Nieto), *Journal of Financial Regulation and Compliance*, Vol. 17, No. 3, pp. 240-276.
- 5 "Business environment and labour market outcomes in European and Central Asian countries" (Paloma López García), *Journal of Entrepreneurial Finance & Business Ventures*, 12(4), pp. 35-67.
- 6 "Determinants of domestic and cross-border bank acquisitions in the European Union" (María Jesús Nieto, Ignacio Hernando and Larry D. Wall), *Journal of Banking and Finance*, 33 (6), June, pp. 1022-1032.
- 7 "Does high cost of mortgage debt explain why young adults live with their parents?" (Nuno Martins and Ernesto Villanueva), *Journal of the European Economic Association*, 7 (5), September, pp. 974-1010.
- 8 "EAD Calibration for corporate credit lines" (G. Jiménez, J. A. Lopez and J. Saurina), *Journal of Risk Management of Financial Institutions*, Vol. 2, No. 2, January-March, pp. 121-129.

1. All Working Papers and Occasional Papers and all external publications are listed in the Appendix.

- 9 “Empirical analysis of corporate credit lines” (Gabriel Jiménez, José A. López and Jesús Saurina), *Review of Financial Studies*, 22 (12), December, pp. 5069-5098.
- 10 “Employment Generation by Small Producers in Spain” (Paloma López García, Sergio Puente and A. L. Gómez), *Studia Negotia* (4), pp. 21-52.
- 11 “Gender differences in Wage Growth and Job Mobility of Young Workers in Spain” (Laura Hospido), *Investigaciones Económicas*, 33(1), pp. 5-37.
- 12 “Informational differentiation, interest rate dispersion and market power” (A. Martín, V. Salas and J. Saurina), *Applied Economic Letters*, 16 (16), pp. 1645-1649.
- 13 “International Trade Policy towards Monopoly and Oligopoly” (P. Kujal and J. Ruiz), *Review of International Economics*, 17(3), pp. 461-475.
- 14 “Labor market reform and price stability: an application to the Euro Area” (Carlos Thomas and Francesco Zanetti), *Journal of Monetary Economics*, 56 (6), September, pp. 885-899.
- 15 “Modelling the distribution of credit losses with observable and latent factors” (Gabriel Jiménez Zambrano and Javier Mencía), *Journal of Empirical Finance*, 16(2), pp. 235-253.
- 16 “Monetary effects on nominal oil prices” (Anton Nakov and Max Gillman), *North American Journal of Economics and Finance*, Vol. 20(3).
- 17 “Multivariate location-scale mixtures of normals and mean-variance-skewness portfolio allocation” (J. Mencía and E. Sentana), *Journal of Econometrics*, 153 (2), December, pp. 105-121.
- 18 “Option-implied preferences adjustments, density forecasts, and the equity risk premium” (Francisco Alonso, Roberto Blanco and Gonzalo Rubio), *Spanish Economic Review*, 11 (2), pp.141-164.
- 19 “Organizational distance and use of collateral in business loans” (G. Jimenez, V. Salas and J. Saurina), *Journal of Banking and Finance*, 33, pp. 234-243.
- 20 “Parametric properties of semi-nonparametric distributions, with applications to option valuation” (J. Mencía, A. León and E. Sentana), *Journal of Business and Economic Statistics*, Vol. 27, pp. 176-192.
- 21 “Testing for Conditional Heteroscedasticity in the Components of Inflation” (C. Broto and E. Ruiz), *Studies in Nonlinear Dynamics & Econometrics*, Vol. 13, No. 2, Article 4.
- 22 “The private and fiscal returns to schooling in the European Union” (Ángel de la Fuente and Juan F. Jimeno), *Journal of the European Economic Association*, 7 (6), December, pp. 1319-1360.
- 23 “The trade-off between debt reduction and automatic stabilisation” (Paul Hiebert, Javier J. Pérez and Massimo Rostagno), *Economic Modelling*, 26, pp. 464-472.

- 24 “Un análisis de la estructura institucional de protección de datos en España” (J. S. Mora and E. López Román), *Indret*, 2, pp. 1-34.
- 25 “Un sistema ARIMA con agregación temporal para la previsión y el seguimiento del déficit del Estado” (Teresa Leal and J. J. Pérez), *Hacienda Pública Española*, 190, pp. 27-58.
- 26 “What explains the low profitability of Chinese banks?” (Alicia García-Herrero, Sergio Gavilá and Daniel Santabarbara), *Journal of Banking and Finance*, 33 (11), November, pp. 2080-2092.
- 1 “A new approach to measuring competition in the loan markets of the euro area” (M. van Leuvensteijn, J. A. Bikker, A. A. R. J. M. van Rixtel and C. Kok-Sørensen), *Applied Economics*.
- 2 “A revision of the self-selection of migrants using returning migrants’ earnings” (Aitor Lacuesta), *Annales d’Économie et de Statistique*.
- 3 “Current Accounts in the Euro Area: An Intertemporal Approach” (A. Gavilán and J. M. Campa), *Journal of International Money and Finance*.
- 4 “Discussion of the paper entitled A Rational Expectations Model for Simulation and Policy Evaluation of the Spanish Economy” (J. J. Pérez), *SERIEs (Spanish Economic Review-Investigaciones Económicas)* (Note).
- 5 “Fiscal policy shocks in the euro area: an empirical assessment” (Pablo Burriel, Francisco de Castro, Daniel Garrote, Esther Gordo, J. Paredes and J. J. Pérez), *Fiscal Studies*.
- 6 “From Income to Consumption: Measuring Households’ Partial Insurance” (J. M. Casado), *Empirical Economics*.
- 7 “Have real interest rates really fallen that much in Spain?” (Roberto Blanco and Fernando Restoy), *Revista de Economía Aplicada*.
- 8 “How to measure a fiscal stimulus” (Francisco de Castro, J. Kremer and T. Warmedinger), *Presupuesto y Gasto Público*.
- 9 “Introducing the Euro-Sting: Short Term Indicator of Euro Area Growth” (Gabriel Pérez-Quirós and Máximo Camacho), *Journal of Applied Econometrics*.
- 10 “Is a Calvo price-setting model consistent with individual price data?” (Luis Julián Álvarez and Pablo Burriel), *The B.E. Journal of Macroeconomics (Advances)*.
- 11 “MEDEA: a DSGE model for the Spanish economy” (Pablo Burriel, Jesús Fernández-Villaverde and Juan Rubio-Ramírez), *SERIEs (Spanish Economic Review-Investigaciones Económicas)*.
- 12 “Monetary Policy Tradeoffs with a Dominant Oil Producer” (Anton Nakov and Andrea Pescatori), *Journal of Money, Credit and Banking*, Vol. 42(1).

1.2 FORTHCOMING
PUBLICATION

- 13 “Oil and the Great Moderation” (Anton Nákov and Andrea Pescatori), *Economic Journal*.
- 14 “Omitted Variables in the Measurement of a Labour Quality Index: The Case of Spain” (Aitor Lacuesta, Sergio Puente and Pilar Cuadrado), *Review of Income and Wealth*.
- 15 “On the Aggregate Effects of Immigration in Spain” (Mario Izquierdo, Juan F. Jimeno and Juan Rojas), *SERIEs (Spanish Economic Review-Investigaciones Económicas)*.
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- 17 “Short-term monitoring of the Spanish government balance with mixed-frequencies models” (Teresa Leal, D. J. Pedregal and J. J. Pérez), *SERIEs (Spanish Economic Review-Investigaciones Económicas)*.
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- 20 “Some macroeconomic and monetary policy implications of new microeconomic evidence on wage dynamics” (Gregory De Walque, Juan F. Jimeno, Michael Krause, Hervé Le Bihan, Stephen Millard and Frank Smets). *Journal of the European Economic Association, Papers and Proceedings*.
- 21 “Spain in the Euro: a General Equilibrium Analysis” (Javier Andrés, Samuel Hurtado, Eva Ortega and Carlos Thomas). Accepted for *SERIEs (Spanish Economic Review-Investigaciones Económicas)*.
- 22 “SPAIN-STING: Spain Short-Term Indicator of Growth” (Gabriel Pérez-Quirós and Máximo Camacho), *The Manchester School*.
- 23 “Speculative Hyperinflations and Currency Substitution” (Óscar Arce), *Journal of Economic Dynamics and Control*.
- 24 “The Incidence of Nominal and Real Wage Rigidity: an Individual-Based Sectoral Approach” (Julián Messina, J. P. du Caju, C. Duarte, Mario Izquierdo and N. Hansen), *Journal of the European Economic Association, Papers and Proceedings*.
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- 26 “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, January, pp. 98-119.

2 Publications in non-refereed journals, books and book chapters, and other publications

2.1 PUBLISHED IN 2009

- 27 “Wealth Inequality and Household Structure: US vs. Spain” (Olympia Bover), *Review of Income and Wealth*.
- 1 “¿Afecta a China la inversión extranjera directa en América Latina?” (A. García-Herrero and D. Santabárbara), in *La mano invisible de China en América Latina*, J. Santiso (ed.), Estudios del Centro de Desarrollo, OECD, Ch. 5, pp. 149-175.
- 2 “A characterization of the judicial system in Spain: Analysis with formalism indices” (J. S. Mora), *FEDEA Working Papers 2009-23*.
- 3 “Automatic Model Identification of Many Series with Program TSW: Aggregate Results” (Agustín Maravall), *JSM Proceedings*, American Statistical Association (Business and Economics Section), pp. 424-438.
- 4 “Bankruptcy and reorganization procedures for cross-border banks in the EU: Towards an integrated reform of the EU safety net” (G. H. García, R. M. Lastra and M. J. Nieto), *Special Paper 186, London School of Economics Financial Markets Group*, May.
- 5 “Dealing with an international credit crunch. Policy responses to sudden stops in Latin America. Appendix: The unsuccessful cases” (B. Bencich, F. López-Vicente and M. del Valle), in *Dealing with an international credit crunch. Policy responses to sudden stops in Latin America*, E. Cavallo and A. Izquierdo (eds.), Inter-American Development Bank (IDB).
- 6 “Desequilibrios globales y su financiación por las economías emergentes: ¿un antes y un después?” (E. Alberola and J. M^a Serena), *ARI* No. 100-2009, Real Instituto Elcano.
- 7 “Domestic Financial Development in Emerging Economies: Evidence and Implications” (E. Dorrucchi, A. Meyer-Cirkel and D. Santabárbara), *ECB Occasional Paper series*, No. 102, April.
- 8 “Dynamic provisioning. The experience of Spain” (J. Saurina), Note No. 7, The World Bank, July.
- 9 “El efecto del ciclo económico en las entradas y salidas de inmigrantes de España” (Aitor Lacuesta and Sergio Puente), *Principios: Estudios de Economía Política*, 14. May, pp. 25-48.
- 10 “El Informe del grupo de alto nivel sobre supervisión financiera en la UE: el informe Larosièrè” (L. Field, D. Pérez and J. Pérez), *Estabilidad Financiera*, No. 16, 05/2009, Banco de España.
- 11 “El sector exterior de la economía española en 2008” (Patrocinio Tello and C. García), *Anuario Internacional CIDOB 2009* (June), pp. 337-344.
- 12 “El sector servicios” (Javier Jareño), in *Economía Española*, 2nd ed., José Vallés Ferrer (ed.), McGraw-Hill/Interamericana de España, S.A.U., pp. 225-244.

- 13 “Empleo y mercado de trabajo. Balance global” (Mario Izquierdo and V. Heranz), *Economistas*, No. 119, March, pp. 202-208.
- 14 “Employment dynamics with downward wage rigidity: the role of moral hazard” (James Costain and Marcel Jansen), *IZA Discussion Papers*, 4344.
- 15 “La instrumentación de la política monetaria del Eurosistema y el funcionamiento del mercado interbancario durante la crisis financiera” (Juan Ayuso and Roberto Blanco), *Papeles de Economía Española*, 122, pp. 254-268.
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- 17 “Loan loss provisions. A working macroprudential tool” (J. Saurina), *Estabilidad Financiera*, No. 17, 11/2009.
- 18 “Los instrumentos híbridos en los recursos propios de las entidades financieras: naturaleza y cambios tras la crisis financiera” (J. M. Marqués and A. Sanchís), *Estabilidad Financiera*, No. 17, 11/2009.
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- 20 “Materias primas, inflación y políticas monetarias: una perspectiva global” (E. Alberola, J. C. Berganza and P. López-Urruchi), *Fondo Latinoamericano de Reservas (FLAR), Papers and Proceedings*, III Economic Studies International Conference.
- 21 “Mitigating the Procyclicality of Basel II” (R. Repullo, J. Saurina and C. Trucharte), in *Macroeconomic Stability and Financial Regulation: Key Issues for the G20*, edited by M. Dewatripont, X. Freixas and R. Portes. RBWC/CEPR, pp. 105-112.
- 22 “Petrodólares del golfo pérsico en el siglo XXI” (P. L’Hotellerie-Fallois and J. M^a Serena), in *Claves de la economía mundial*, ICEI-ICEX, pp. 420-426.
- 23 “Políticas reactivas, medidas regulatorias y sistema bancario” (J. M. Roldán and I. Argimón), in *La reforma de la arquitectura financiera internacional*, coordinated by J. Q. Alonso, S. Fernández de Lis and F. Steiberg. Ed AFI.
- 24 “¿Qué es lo que nos dicen los datos de los precios microeconómicos sobre la validez de la curva de Phillips nekeynesiana?” (Luis Julián Álvarez), *Monetaria XXXI (4)*, pp. 427-480.
- 25 “¿Qué queda de la agenda *Legislar mejor?*” (I. Argimón). *Estabilidad Financiera*, No. 17, 11/2009.
- 26 “Reflexiones sobre regulación bancaria a raíz de la crisis financiera internacional” (J. Saurina), *Papeles de Economía Española*, 122, pp. 193-205.
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- 29 “The 2002 Wave of the Spanish Survey of Household Finances. Sample Description and Some Results” (Ernesto Villanueva), *Irving Fisher Committee Bulletin* 30, Session 2BA: Case Study: Spain. Bank of International Settlements.
- 30 “Un nuevo perímetro de regulación para después de la crisis” (J. M. Roldán and I. Argimón), *Economistas*, 120/2009.
- 31 “Una valoración de la reforma del sistema bancario chino” (A. García-Herrero and D. Santabárbara), in *China: el socio emergente*, Boletín Económico de ICE No. 2972, September, pp. 131-144.
- 32 “What has happened in Europe? Monetary policy, lending cycles, banking competition, risk taking and regulation” (J. Saurina), in *The First Credit Market Turmoil of the 21st Century*, compiled by Douglas D. Evanoff, Philipp Hartmann and George G. Kaufman. *World Scientific Studies in International Economics*, 10, pp. 67-86.
- 33 “Will they sing the same tune? Measuring Convergence in the new European System of Financial Supervisors” (D. Masciandaro, M. J. Nieto and M. Quintyn), *Centre for Economic Policy Research Policy Insight*, No. 37, July.

2.2 ACCEPTED FOR
PUBLICATION

- 1 “Retirement behaviour and retirement incentives in Spain” (Raquel Vegas, I. Argimón, Marta Botella and Clara I. González), in *Pension Reform, Fiscal Policy and Economic Performance*, Ed. Banca d’Italia.
- 2 “The contribution of structured finance to the financial crisis: An introductory overview” (A. van Rixterl and S. Criado), in Robert W. Kolb (ed.), *Lessons from the Financial Crisis: Causes, Consequences and Our Economic Future*, Hoboken, NJ: John Wiley & Sons, Inc.

3 Working Papers and Occasional Papers

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- SANTIAGO FERNÁNDEZ DE LIS AND FERNANDO RESTOY (Eds.): Central banks in the 21st century (2006). Free copy.
- JUAN F. JIMENO (Ed.): Spain and the euro. The first ten years (2010). Free copy.

Statistics

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- Boletín del Mercado de Deuda Pública (daily) (available only in electronic format on the website)
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