ROBERTO PASCUAL

Personal Information

Birth Date:	04-08-1973
Nationality:	Spanish
Contact: (Spain)	Business Economics Department University of the Balearic Islands Ctra. Valldemossa, Km. 7.5 07122 Palma de Mallorca Balearic Islands, SPAIN Phone: +34-971-17-13-29 (office) Fax: +34-971-17-23-89 (office) e-mail: rpascual@uib.es

Professional Experience

- Visiting Fellow, International Center for Finance, Yale School of Management, Yale University, New Haven, Connecticut, USA, February 2012 – January 2013.
- Associate Professor of Finance, University of the Balearic Islands, Spain, Dcember 2006-present.
- Visiting Professor, ECARES, Université Libre de Bruxelles, Brussels, Belgium, October 2008 – December, 2008.
- Visiting Scholar, NYU Salomon Center, New York University, New York, USA, March 2003-February 2004.
- Associate Professor of Finance without tenure, University of the Balearic Islands, Spain, October 2000-November 2006.
- Teaching Assistant of Finance, University of the Balearic Islands, Spain, October 1999 - September 2000.
- Teaching Assistant of Finance and Business Economics, University Carlos III, Madrid, Spain, September 1995 - September 1999.

Education

- Ph.D., University Carlos III, Madrid, Spain, March 2001 (Economics), Summa Cum Laude. Extraordinary Award.
- B.A., University Jaume I, Castellón, Spain, September 1995 (Business Administration), Extraordinary Award.

Ph.D. Dissertation (March, 2001)

- Tiltle: 'Market Microstructure: Trading Activity, Adverse Selection Costs and Liquidity'.
- Advisors: A. Escribano (Associate Prof.) and M. Tapia (Associate Prof.), University Carlos III, Madrid.
- Extraordinary Award, best Ph.D. dissertation, University Carlos III, academic year 2000-2001, field of Business and Finance.

Research Interests

- Financial Market Microstructure, Financial Econometrics, Financial Economics, Experimental Finance, Banking.

Research Topics

- Liquidity supply in order-driven markets, order choice, hidden volume, informativeness of the trading process, circuit breakers, price discovery at high frequencies, trading frictions, informativeness of the limit order book, price discovery and cross-listed assets, trade classification algorithms, market quality, high-frequency trading, derivatives in greenhouse gas emissions, bank opacity etc.

Publications

- Chakrabarty, B., R. Pascual, and A. Shkilko, 2015. “Evaluating trade classification algorithms: bulk volume classification versus the tick rule and the Lee-Ready algorithm”. *Journal of Financial Markets*, 25, 52-79 (JCR, Impact factor: 2.111)
- Abad, D., and R. Pascual, 2015, “The friction-free weighted price contribution”. *International Review of Economics and Finance*, 37, 226-239. (JCR, Impact factor: 1.704)
- Pascual, R., and B. Pascual-Fuster, 2014, "The relative contribution of ask and bid quotes to price discovery". *Journal of Financial Markets*, 20, 129-150. (JCR, Impact factor: 2.111)
- Medina, V., A. Pardo and R. Pascual, 2014, "The timeline of trading frictions in the European CO2 market". *Energy Economics* 42, 378-394. (JCR, Impact factor: 2.708)
- Medina, V., A. Pardo and R. Pascual, 2013, “Carbon credits: Who is the leader of the pack?”, *International Journal of Energy Economics and Policy* 3, 3, 210-220.
- Pardo, A., and R. Pascual, 2012, "On the Hidden Side of Liquidity", *European Journal of Finance*, 18, 10, 949-967. (JCR, Impact factor: 0.750)
- Abad, D., and R. Pascual, 2010, “Switching to a temporary call auction in times of hight uncertainty”, *Journal of Financial Research* 33, 1, 45-75.
- Pascual, R. and D. Veredas, 2010, “Does the Open Limit Order Book Matter in Explaining Informational Volatility?”, *Journal of Financial Econometrics* 8, 57-87. (JCR, Impact factor: 1.302)
- Pascual, R. and D. Veredas, 2009, “What pieces of limit order book information matter in explaining the behavior of aggressive and patient traders?”, *Quantitative Finance* 9, 527-545. (JCR, Impact factor: 0.754)
- Pardo, A. and R. Pascual, 2008, “The Use of Hidden Limit Orders in the Spanish Stock Exchange”, *Cuadernos de Economía y Dirección de Empresas* 34, 31-52 (in Spanish).
- Abad, D., and R. Pascual, 2007, On the Magnet Effect of Price Limits, *European Financial Management Journal* 13, 5, 833-852. (JCR, Impact factor: 1.1.58)
- Escribano, A., and R. Pascual, 2006, Asymmetries in Bid and Ask Responses to Innovations in the Trading Process, *Empirical Economics* 30, 913-946. (JCR, Impact factor: 0.693)
- Pascual, R., Pascual-Fuster, and B., F. Climent, 2006, “Cross-listing, Price Discovery, and the Informativeness of the Trading Process”, *Journal of Financial Markets* 9, 144-161. (JCR, Impact factor: 2.111)
- Pascual, R., Escribano, A. and M. Tapia, 2004, “Adverse selection costs, trading activity and price discovery in the NYSE: An empirical analysis”, *Journal of Banking and Finance* 28, 107-128. (JCR, Impact factor: 1.299)
- Pascual, R., Escribano, A. and M. Tapia, 2004, “On the bi-dimensionality of liquidity”, *European Journal of Finance* 10, 6, 542-566. (JCR, Impact factor: 0.750)
- Pascual-Fuster, B., F. Climent, and Pascual, R., 2004, “The Role of the NYSE in the price discovery process of the most important Spanish ADRs”, *Revista Española de Financiación y Contabilidad* 33, 47-64 (in Spanish).
- Pascual, R., and D. Veredas, 2004, “What components of the limit order book are informative?”, *Bolsa de Madrid* 131, 72-74.
- Pascual, R. and M. Larraza, 2003, “The control role of the board of directors: What have we learned?”, *Journal of Management Research* 1, 61-78.
- Pascual, R., 2003, “Liquidity: A survey on market microstructure research”, *Financial Economics Review* 61-78 (in Spanish).

Book Chapters

- Pardo, A., and R. Pascual, 2015, On the hidden side of liquidity, in Nolte, I., M. Salmon, and C. Adcock (Eds.) *High Frequency Trading and Limit Order Book Dynamics*, Routledge, New York.
- Abad, D., and R. Pascual, 2013, Holding back volatility: Circuit breakers, price limits and trading halts, in Baker, K., and H. Kiymaz (Eds.) *The Kolb Series in Finance: Market Microstructure in Emerging and Developed Markets*, John Wiley and Sons, Inc.
- Escribano, A., and R. Pascual, 2007, Asimmetries in the dynamics of ask and bid responses to innovations in the trading process, in Bauwens, L., W. Pohlmeier, and D. Veredas (Eds.) *High Frequency Financial Econometrics: Recent Developments,* Physica-Verlag, Springler, New York.

Work in Progress

- Abad, D., M. Massot, and R. Pascual, 2015, “Evaluating VPIN as a trigger for single-stock circuit breakers”. Under evaluation.
- Chakrabarty, B, P. Moulton, and R. Pascual, 2015, “Shackled High Speed Traders? Latency reductions and short sale bans”. Under evaluation.
- Barreda, I., R. Pascual, and C. Solà, 2016, "Strategic informed trading and price discovery: An experimental design", in progress.
- Abad, D., R. Pascual, and P. Yagüe, 2016, “The net order flow: beyond the imbalance between buys and sells”, in progress.
- Massot, M., and R. Pascual, 2016, “Bulk volume classification accuracy in estimating the net order flow”, in progress.
- Abad, D., R. Pascual, and P. Yagüe, 2016, “On the informativeness of the undisclosed net order flow”, in progress.

PhD Dissertations and Master Thesis advised

- Gaebler, Catalina, Master in Banking and Quantitative Finance, University of Valencia, 2015: “Latency and market quality: the case of the SIBE-Smart in the Spanish Stock Exchange”.
- Medina, Vicente, PhD Program on Quantitative Finance, University of Valencia, 2013: “Essays on EUAs”.
- Vich, Maria Magdalena, PhD Program on Quantitative Finance, University of Valencia (in progress): “Inherent information in the price of options: return predictability, portfolio theory, and adverse selection costs”.

Supported Research Projects

- Research Project “High Frequency Trading in stock exchanges: Volatility, efficiency and short selling bans”, Fundación BBVA, “I Convocatoria de Ayudas Fundacion BBVA a Investigadores, Innovadores y Creadores Culturales 2014”. Chief Researcher: Roberto Pascual (University of the Balearic Islands). Period: 2015.
- Research Project ECO2013-4409-P “Opacity in bank firms: determinats, contribution to the economic and financial crisis and bank managers compensation", Ministerio de Educación e Innovación (Spanish Ministry of Education and Innovation). University of the Balearic Islands. Chief Researchers: Antoni Vaello and Alfredo Martin (University of the Balearic Islands). Period: 2015-2017.
- Research Project ECO2010-18567 “Market Microstructure in Order Driven Markets: Price Formation and Liquidity Provision", Ministerio de Educación e Innovación (Spanish Ministry of Education and Innovation). University of the Balearic Islands. Chief Researcher: Roberto Pascual (University of the Balearic Islands). Period: 2010-2014.
- Research Project “Two studies about price discovery and liquidity provision in financial markets”, *Fundacion UCEIF (Fundacion de la Universidad de Cantabria para el Estudio y la Investigación del Sector Financiero*) 2008 Edition. Chief Researcher: Roberto Pascual (University of the Balearic Islands). Period: 2009-2010.
- Research Project SEJ2007-67895-C04-03 “Business Organization, Government Practicies, and Family Control”, Ministerio de Educación y Ciencia (Spanish Ministry of Education and Science). University of the Balearic Islands. Chief Researcher: Rafel Crespí (University of the Balearic Islands). Period: 2008-2010.
- Research Project SEJ2004-07530-C04-04 “Corporate Gobernance: Incentives Structure and Market Efficiency”, Ministerio de Educación y Ciencia (Spanish Ministry of Education and Science). University of the Balearic Islands. Chief Researcher: Rafel Crespí (University of the Balearic Islands). Period: 2004-2007.
- European project "MICFINMA: Microstructure of Financial Markets in Europe", European Comission, Research Directorate-General, Cod. HPRN-CT-2002-00232, Program: VPM-Iproving Human Research Potential. Period: 2002-2006.
- Research Project Ref. DL0544CS3310 “Exploiting the Information Content in a Limit Order Book”, National Bank of Belgium. Period: 2004-2006. Chief Researcher: David Veredas (Université Libre de Bruxelles)

- Research Project "On the Hidden Side of Liquidity", IVIE, Chief Researcher: Ángel Pardo (University de Valencia). Period: 2004.
- Research Project BEC2001-2552-C03-03 "Organizacional Structure and Corporate Governance in Spain", Ministerio de Educación y Ciencia (Spanish Ministry of Education and Science). University of the Balearic Islands. Chief Researcher: Rafel Crespí (University of the Balearic Islands). Since 2003. Period: 2001-2004.
- Research Project "Trading simultaneouly in several markets: The case of the NYSE-listed Spanish ADRs", IVIE, Chief Researcher: Francisco Climent (University of Valencia). Period: 2002.
- Research Project PB98-0030 "Liquidity, Microstructure and Risk Management", Ministerio de Educación y Ciencia (Spanish Ministry of Education and Science). University Carlos III, Madrid. Chief Researcher: Juan Ignacio Peña Sánchez de Rivera (University Carlos III). Period: 2000-2002.
- National Research Project "Technological change and control of costs", D.G.E.S. Chief Researcher: Salvador Carmona (University Carlos III). Period: 1996-1998.

Research Honors

- Co-winner, BME (Spanish Stock Exchange) price, best paper about stock markets presented at the XIX Finance Meetings, Oviedo (Spain), 2012, for "Is the weighted price contribution robust to trading frictions?", (with D. Abad).
- Co-winner, BME (Spanish Stock Exchange) price, best paper about stock markets presented at the XVII Finance Meetings, Madrid (Spain), 2009, for "The relative contribution of ask and bid quotes to price discovery", (with B. Pascual-Fuster).
- Co-winner, Fundación de Estudios Financieros (FEF) 2007 Prize, best research paper about financial markets, for "Switching to a temporary call auction in times of high uncertainty", (with D. Abad).
- Co-winner, BME (Spanish Stock Exchange) price, best paper about stock markets presented at the XV Finance Meetings, Palma de Mallorca (Spain), 2007, for "Quote quality in an order driven market: How much volatility is information and how much is noise?", (with D. Veredas).
- Co-winner, CNMV (Spanish Securities Exchange Comission) price, best paper with implications for market regulators presented at the XIV Finance Meetings, Castellon (Spain), 2006, for "Switching to a temporary call auction in times of high uncertainty", (with D. Abad).
- Co-winner, AEFIN (Spanish Association of Finance) price, best paper presented at the XIV Finance Meetings, Castellon (Spain), 2006, for "Switching to a temporary call auction in times of high uncertainty", (with D. Abad).
- Co-winner, best paper in the field of Finance in the VII Spanish-Italian Meeting on Financial Mathematics, Cuenca (Spain), 8-9 of July 2004, for "On the hidden side of liquidity" (with A. Pardo).
- Co-winner, Josseph de la Vega Prize, Federation of European Securities Exchanges (FESE), best research paper, Frankfurt (Germany), June 2004, for "On the hidden side of liquidity" (with A. Pardo).
- Co-winner, AEFIN (Spanish Association of Finance) price, best paper presented at the IX Finance Meetings, Pamplona (Spain), 2001, for "Adverse selection costs, trading activity and price discovery in the NYSE: an empirical analisis" (with A. Escribano and M. Tapia).
- Extraordinary Award, best Ph.D. dissertation, University Carlos III, academic year 2000-2001, field of Business and Finance.

Research Visiting

- International Center for Finance, Yale School of Management, Yale University. Visiting Fellow. Official sponsor: Professor William N. Goetzmann. Period: February 2012 – January 2013
- Université Libre de Bruxelles, ECARES, Brussels, Belgium. October 2008 – December 2008.
- NYU Salomon Center, Department of Finance, Stern School of Business, New York University. Visiting Scholar. Official sponsor: Professor Ingo Walter. Period: March 2003 – February 2004.

Recent Research Presentations

International Conferences

- Auckland Finance Meeting, Auckland, New Zealand, December 18-19, 2015.
- XIV European Economics and Finance Society (EEFS) Conference, Brussels, Belgium, June 11-14, 2015.
- World Finance Conference, Venice, Italy, July 2-4, 2014.
- Multinational Finance Society, Prague, Check Republic, June 26-28, 2014.
- FMA European Conference, Luxemburg, Luxemburg, June 12-14, 2013.
- 16th SGF (Swiss Society for Financial Market Research) Conference, Zurich, Switzerland, April 12, 2013.
- World Finance Conference, Rio de Janeiro, Brazil, July 1-6, 2012.
- Eastern Finance Association Meeting, Boston, USA, April 11-14, 2012.
- European Financial Management Association Annual Meetings, Braga, Portugal, June 22-26, 2011.
- INFINITY Conference on International Finance, Dublin, June 13-14, 2011.
- FMA European Conference, Hamburg, Germany, June 9-11, 2010.
- 17th SFM Conference, Kaohsiung, Taiwan, December 11-12, 2009.
- ABER 8th Global Conference on Business and Economics, Florence, Italy, October 18-19, 2008.
- European Financial Management Association Meeting, Athens, Greece, August 25-28, 2008.
- European Financial Association Meeting, Zurich, Switzerland, August 23-26, 2006.
- European Financial Management Association Annual Meetings, Madrid, Spain, June 23-26, 2006.
- Workshop on The Econometrics of Microstructure of Financial Markets, Konstanz, Germany, May 19-20, 2006.
- Workshop on The Econometrics of Microstructure of Financial Markets, Tilburg, The Netherlands, April 23-24, 2004.
- European Financial Management Association Annual Meetings, London, England, June 24-26, 2002.
- European Financial Association Meeting, Barcelona, Spain, August 23-26, 2001.
- CAF Market Microstructure and High Frequency Data in Finance Workshop, Sønderborg, Denmark, August 5-9, 2001.
- 27th Meeting of the Euro Working Group on Financial Modelling, New York City, U.S.A., November 16-18, 2000.
- 10th $(EC)^2$ Meetings on Financial Econometrics, Poster Session, Madrid, Spain, December 9-11, 1999.
- European Financial Management Association Annual Meetings, Paris, France, June 24-26, 1999.

Spanish Conferences

- XXIV Finance Forum, Madrid, July 7-8, 2016.
- XXIII Finance Forum, Madrid, July 9-10, 2015.
- XXI Finance Forum, Segovia, November 14-15, 2013.
- XIX Finance Forum, Granada, November 19-20, 2011.
- XVII Finance Forum, Madrid, November 4-5, 2009.
- XV Finance Forum, Palma de Mallorca, November 15-16, 2007.
- XIV Finance Forum, Castellón, November 16-17, 2006.
- XII Finance Forum, Barcelona, December 9-10, 2004.
- XII Congreso Nacional ACEDE, Palma de Mallorca, September 22-24, 2002.
- IX Finance Forum, Pamplona, November 15-27, 2001.
- VIII Finance Forum, Madrid, October 25-27, 2000.
- IV Workshop de Finanzas, Segovia, July 4-6, 2000.
- VII Finance Forum, Valencia, November 25-26, 1999.

Research Seminars

- University Rovira i Virgili, "Evaluating VPIN as a trigger for single-stock circuit breakers", May 7, 2015.
- University Carlos III of Madrid, "Evaluating VPIN as a trigger for single-stock circuit breakers", April 23, 2015.
- University Cardenal-Herrera-CEU, "The relative contribution of ask and bid quotes to price discovery", June 29, 2009.
- University of Valencia, "The relative contribution of ask and bid quotes to price discovery", June 26, 2009.

- University Carlos III of Madrid, "The relative contribution of ask and bid quotes to price discovery", June 22, 2009.
- Univerity CEU Cardenal Herrera, "Does the open limit order book matters in explaining informational volatility?", February 2008, Elche, Spain.
- University of Valencia, "Switching to a temporary call auction in times of high undertainty", Septiember 2006, Valencia, Spain.
- University of Alicante, "Does the LOB matters in explaining long run volatility?", March 2006, Alicante, Spain.
- Université Libre de Bruixelles, ECARES, "On the Hidden Side of Liquidity", November 30, 2004, Brussels, Belgium.
- Bolsa de Madrid, "What pieces of limit order book information are informative?", April 6, 2004, Madrid, Spain.
- University of Alicante, Economics Seminars, "All we wanted to know about liquidity and were not afraid to ask: A survey of market microstructure research", February 1, 2002, Alicante, Spain.
- University of La Laguna, "One stock and many markets: Price formation, cross-listing and trading activity. The case of the Spanish NYSE-listed stocks", December, 2002, Tenerife, Spain.
- Université Catholique de Louvain, Center for Operations Research and Econometrics (CORE), Econometrics Seminars, "Asymmetries in bid-ask responses to the innovations in the trading process", November 29, 2000, Louvain la Neuve, Belgium.

Discussions in international conferences

- Auckland Finance Meeting, Auckland, New Zealand, December 18-19, 2015.
- XIII Finance Forum, Madrid, Spain, July 9-10, 2015.
- World Finance Conference, Venice, Italy, July 2-4, 2014.
- Multinational Finance Society, Prague, Check Republic, June 26-28, 2014.
- FMA European Conference, Luxemburg, Luxemburg, June 12-14, 2013.
- 16th SGF Conference, Zurich, Switzerland, April 12, 2013.
- World Finance Conference, Rio de Janeiro, Brazil, July 1-6, 2012.
- Easter Finance Association Meetings, Boston, USA, April 11-14, 2012.
- 17th SFM Conference, Kaohsiung, Taiwan, December 11-12, 2009.
- ABER 8th Global Conference on Business and Economics, Florence, Italy, October 18-19, 2008. European Financial Management Association Meeting, Athens, Greece, August 25-28, 2008.
- European Financial Association Meeting, Zurich, Switzerland, August 23-26, 2006.
- European Financial Management Association Annual Meetings, London, England, June 24-26, 2002.
- European Financial Association Meeting, Barcelona, Spain, August 23-26, 2001.
- European Financial Management Association Annual Meetings, Paris, France, June 24-26, 1999.

Research fellowships

- Fundación BBVA, "I Convocatoria de Ayudas Fundacion BBVA a Investigadores, Innovadores y Creadores Culturales 2014". Period: 2015.
- Spanish Ministry of Education Grant. Program: "Mobility of senior Spanish professors and researchers". Research stay at the International Center for Finance, Yale School of Management, Yale University, Connecticut, USA. Period: February 2012 to February 2013.
- Fulbright Grant, Visiting Scholar, Department of Finance, Stern School of Business, New York University, period March 2003 to February 2004.
- Financial Economics Research Project Fellowship, Fundación Caja de Madrid, for the Ph.D. project "Essays about Liquidity", University Carlos III, Madrid, Spain.
- Cooperation Fellowship, Ministerio de Educación y Ciencia (Spanish Ministry of Education and Science), Department of Business, University Jaume I of Castellón, 1994-1995.

Professional Activities

Teaching in international PhD/Master programs

- Master course: "Asset pricing and trading frictions", Master in Finance, Barcelona Graduate School of Economics, Universitat Pompeu Fabra, 18 hours, year, 2015.

- Máster course: "Market Microstructure", Master in Finance, Barcelona Graduate School of Economics, Universitat Pompeu Fabra, 14 hours, 2010-2011.
- PhD course: "Finance and Markets", Doctorate in Economics, Management and Organization, Universitat Autònoma de Barcelona, 8 hours, from February 2010 to present.
- PhD course: *Empirical Market Microstructure*, Tilburg University, The Netherlands, 10 hours, May 2004.

Others

- Ad-hoc Referee: *Journal of Banking and Finance, Journal of Applied Econometrics, Journal of Financial Markets, Journal of Empirical Finance, Review of Finance, The Financial Review, European Financial Management Journal, Quantitative Finance, Management Science, Spanish Economic Review*, *Empirical Economics, European Accounting Review*, *Asia Pacific Management Review*, *Global Business and Economics Review*, *Moneda y Crédito*, *Revista de Economía Aplicada, Investigaciones Económicas, Revista Española de Financiación y Contabilidad.*
- Member of the Scientific Committee of the XXIV Finance Meeting, Madrid, 2016.
- Member of the Scientific Committee of the XXIII Finance Meeting, Madrid, 2015.
- Member of the Scientific Committee of the XXII Finance Meeting, Universidad de Zaragoza, 2014.
- Member of the Scientific Committee of the XVIII Finance Meeting, Universidad Cardenal-Herrera-CEU, Elche, Alicante, 2010.
- Member of the Scientific Committee of the XIV Finance Meeting, Univeristy Jaume I, Castellón, 2006.
- Member of the Scientific Committee of the XII Finance Meeting, University Pompeu Fabra, Barcelona, 2004.
- Member of the Program Committee of the 17th Annual Meeting of the *European Financial Management Association* (EFMA), Athens, Greece, 2008.
- President of the Organizational Committee of the XV Finance Meeting of AEFIN, Palma de Mallorca, November, 2007.
- Member of the Organizational Committee of the XII Congreso Nacional de ACEDE, Palma de Mallorca, September, 2002.
- Member of the "De la Vega Prize" Advisory Jury, Federation of European Securities Exchanges (FESE), 2005 - present.
- Member of the 2008, 2012, y 2013 Technical Comission of the *Subdirección General de Proyectos de Investigación*, Spanish Ministry of Education and Science (MEC), for the evaluation of R&D projects in Economics.
- Referee of the National Agency of Evaluation and Prospective of R&D projects, Ministry of Science and Technology, years 2006, 2007, 2009, 2010, and 2011.
- Member of the Board of Examiners of the doctoral thesis "Essays in Market Microstructure" by Peter Hoffmann, University Pompeu Fabra, July 2011.
- Associate Editor, *Revista de Economía Financiera*, 2003-2007*.*
- Secretary of the Faculty of Economics and Business, University of the Balearic Islands, 2013-present.