Laurent Ferrara

Banque de France
DGEI-DCPM-DIACONJ
39 rue Croix des Petits Champs
46-1383, 75049 Paris Cedex 01
tel. : +33 (0)1 42 92 29 10
email : laurent.ferrara@banque-france.fr / laurent.ferrara@u-paris10.fr
Web site : http://lo.ferrara.free.fr

Birth date : 25 February, 1972
French

Update : January 2010

Current positions

Economist-Researcher, Banque de France, Paris
Research fellow, EconomiX, University Paris Ouest Nanterre

Education

Research Habilitation in Economics, December 2007, University Paris 1 - Panthéon - Sorbonne. Supervisor : T. Chauveau (Univ. Paris 1), Referees : M. Billio (Univ. Ca Foscari, Venice), C. Bordes (Univ. Paris 1), G. Cette (Univ. Aix-Marseille 2), C. de Boissieu (Univ. Paris 1) and D. Guégan (Univ. Paris 1)

PhD Thesis in Statistics, December 2000, University Paris 13
Supervisor: D. Guégan (University Paris 1), Referees: P.M Robinson (LSE, London) and C. Starica (Chalmers University, Sweden).

MSc in Statistics, June 1996, University Montpellier 2

Professional Experience

Since January 2010 — **EconomiX, U. Paris Ouest** (Nanterre La Défense)
Research fellow
EconomiX (CNRS – University Paris Ouest), Financial and Banking Axis

Since April 2007 — **Bank of France** (Paris)
Economist-Researcher
Business Conditions and Macroeconomic Forecasting Directorate
Economic analysis and forecasting for the main macroeconomic variables of Euro area countries, research and development of short-term forecasting econometric methods, research papers in international journals, organization of workshops and colloquiums, collaboration with researchers within the Eurosystem on joint research projects

January 2006 – December 2009 — **Centre d'Economie de la Sorbonne** (Paris)
Research fellow
Centre d'Economie de la Sorbonne (CNRS – University Paris 1), Financial and Banking Axis

January 2005 – December 2007 — **Ecole Normale Supérieure** (Cachan)
Associate Professor of Econometrics
ENS is a French Grande Ecole
Courses on econometrics and statistics in the Economics and Management Department, participation to the administration of the Department.

December 2000 – March 2007 — **Centre d'Observation Economique** (Paris)
Quantitative Economist
COE is an economic research institute on the behalf of the Chamber of Commerce in Paris
Development and monitoring of a battery of macroeconomic indicators for the US, France and Euro area, economic cycles analysis, surveys management, working papers and research papers in international academic journals, colloquiums. Expert by Eurostat for international research projects on business cycles.

December 1997 – November 2000 — **RATP** (Paris)
Traffic and Tickets Sales Analyst and Forecast Manager
RATP is the company which manages public transportation in Paris area.
Daily control of the traffic on the whole of RATP network and monthly analysis of traffic and tickets sales. Annual forecasts of traffic and ticket sales in order to built up the budget of the company, based on innovative statistical methods (non-linear time series modelling and non-parametric approaches).

Teaching Experience

Current

Ecole Nationale Supérieure des Techniques Avancées (Engineer School, French *Grande Ecole*)

In charge of the Statistics Module (MSc degree), since September 2003:
« Statistics », « Time Series Forecasting » and « Non-Linear Time Series Models»

Past

University Paris 1 – Panthéon - Sorbonne, 2007-2008, Master in Quantitative Economic Methods
University Paris 2, 2004-2006, MSc in Econometrics
Ecole Normale Supérieure de Cachan, 2005-2007, Associate Professor of Econometrics
Pôle Universitaire Léonard de Vinci, 2001-2002, Quantitative Finance
University of Reims, 2000-2001, MSc in Statistics
ENSAE, 1999-2000, Statistical Software

Publications

Book

Analyser les Séries Chronologiques avec S-Plus : une Approche Paramétrique, Collection « Pratique de la Statistique », Presses Universitaires de Rennes, 147 pages (with D. Guégan, 2002)

Peer-Review Papers

1. Monthly GDP forecasting using bridge models: Comparison from the supply and demand sides for the French economy, to appear in *Bulletin of Economic Research* (with K. Barhoumi, O. Darné and B. Pluyaud, 2010)

2. Testing fractional order of long memory processes: a Monte Carlo study, to appear in *Communications in Statistics – Simulation and Computation* (with D. Guégan and Z. Lu, 2010)

3. Les variables financières sont-elles utiles pour anticiper la croissance économique ? Quelques évidences économétriques, *Revue Economique,* Vol. 61, No. 3, pp.645-656 (2010)

4. Nowcasting Euro area GDP with ragged-edge data: A semi-parametric approach, to appear in *Journal of Forecasting*, Vol. 29, No. 1-2, pp. 186-199 (with D. Guégan and P. Rakotomarolahy, 2010)

5. Are disaggregate data useful for forecasting French GDP with dynamic factor models ? *Journal of Forecasting,* Vol. 29, No. 1-2, pp. 132-144 (with K. Barhoumi and O. Darné, 2010)

6. Un indicateur du cycle d'accélération pour la France, *Economie et Prévision*, No. 189, pp. 93-114 (with M. Adanero-Donderis and O. Darné, 2009)

7. Caractérisation et datation des cycles économiques en zone Euro, *Revue Economique*, Vol. 60, No. 3, pp. 703-712 (2009).

8. A system for dating and detecting turning points in the euro area, *The Manchester School*, Vol. 76, No. 5, pp. 549-577 (with J. Anas, M. Billio and G.-L. Mazzi, 2008)

9. Business surveys modelling with Seasonal-Cyclical Long Memory models, *Economics Bulletin*, Vol. 3, No. 29, pp. 1-10 (with D. Guégan, 2008)

10. Point and interval nowcasts of the euro area IPI, *Applied Economics Letters,* Vol. 14, No. 2, pp. 115-120 (2007)

11. Detection of the industrial business cycle using SETAR models, *Journal of Business Cycle Measurement and Analysis* , Vol. 2, No. 3, pp. 353-372. (with D. Guégan, 2005).

12. Turning points detection: The ABCD approach and two probabilistic indicators », *Journal of Business Cycle Measurement and Analysis* , Vol. 1, No. 2, pp. 1-36. (with J. Anas, 2004)

13. Un outil d'évaluation de la localisation des entreprises industrielles, *Economie Internationale*, No. 99, pp. 91-112 (with A. Henriot, 2004).

14. A three-regime real-time indicator for the US economy, *Economics Letters*, Vol. 81, No. 3, pp. 373-378. (2003)

15. Forecasting with k-factor Gegenbauer processes: Theory and applications, *Journal of Forecasting*, Vol. 20, pp. 581-601. (with D. Guégan, 2001)

16. Analyse d'intervention et prévisions. Problématique et applications à des données de la RATP, *Revue de Statistique Appliquée*, Vol. XLVIII, No. 2, p.55-72. (with D. Guégan, 2000)

Chapters in Books

1. Fractional and Seasonal Filtering, to appear in *Proceedings of the Conference on Seasonality, Seasonal Adjustment and their Implications for Short-Term Analysis and Forecasting*, G.L. Mazzi (ed.) (with D. Guégan, 2009)

2. La compétitivité hors prix des biens sur le marché européen, in *Evolution Récente du Commerce Extérieur Français*, P. Artus and L. Fontagné (eds.), Rapport No. 64, Conseil d'Analyse Economique by the French Prime Minister, November 2006.

3. Real-time detection of the business cycle using SETAR models, in *Growth and Cycle in the Euro-zone*, G.L. Mazzi and G. Savio (eds.), Palgrave-MacMillan, New-York, November 2006, (with D. Guégan)

4. Euro-zone business cycle analysis with multivariate Markov-Switching models, in *Growth and Cycle in the Euro-zone*, G.L. Mazzi and G. Savio (eds.), Palgrave-MacMillan, New-York, 2007 (with M. Billio, J. Anas et M. LoDuca)

5. A turning point chronology for the Euro-zone classical and growth cycle, in *Growth and Cycle in the Euro-zone*, G.L. Mazzi and G. Savio (eds.), Palgrave-MacMillan, New-York, 2007 (with M. Billio, J. Anas et M. LoDuca)

6. Quelle est l'image des entreprises françaises à l'étranger et quelles sont leurs performances à l'exportation ?, in : *Les Entreprises Françaises 2006*, Chapitre 6, pp. 99-112, C. de Boissieu et C. Deneuve (eds.), Economica, Paris. (with A. Henriot, article annuel de 2001 à 2006)

7. A comparative assessment of parametric and non parametric turning points detection methods : the case of the Euro-zone economy, in *Monographs of Official Statistics : Statistical Methods and Business Cycle Analysis of the Euro zone*, G.L. Mazzi and G. Savio (eds.), Eurostat, pp. 86-121. (with J. Anas, 2004)

8. Comparison of parameter estimation methods in cyclical long memory time series, in : *Developments in Forecast Combination and Portfolio Choice*, Chapter 8, C. Dunis, J. Moody and A. Timmermann (eds.), Wiley, New York. (with D. Guégan, 2001)

9. Forecasting financial time series with generalized long memory processes, in : *Advances in Quantitative Asset Management*, p.319-342, C.L. Dunis (ed.), Kluwer Academic Publishers. (with D. Guégan, 2000)

Non-Referred Papers

1. Les marchés immobiliers après la crise : quelles leçons pour la macroéconomie ?, *Bulletin de la Banque de France*, No. 179, 1er trimestre 2010 (with O. de Bandt et O. Vigna)

2. L'apport des indicateurs de retournement cyclique à l'analyse conjoncturelle, *Bulletin Mensuel de la Banque de France*, March 2008

3. OPTIM : un outil de prévision trimestrielle du PIB de la France, *Bulletin Mensuel de la Banque de France*, March 2008 (with K. Barhoumi, O. Darné et B. Pluyaud)

4. Positionnement cyclique des économies, *Diagnostics*, Coe-Rexecode, No. 2, pp. 9-23, January 2007 (with J. Anas)

5. Un indicateur d'entrée et sortie de récession pour la zone euro, *Diagnostics*, Coe-Rexecode, No. 2, pp. 55-62, January 2007

6. Quels enseignements tirer d'un retour du déficit commercial ?, *Le Monde de l'Economie* du 5 April 2005, (with J. Anas et A. Henriot)

7. La diffusion d'une récession ne se fait pas de manière identique selon les pays, interview publiée dans *Le Monde de l'Economie*, 22 October 2003, (with J. Anas)

8. La France, bien placée dans la compétition internationale, *Le Monde de L'Economie*, 2nd February 2002 (with J. Anas et A. Henriot)

9. La compétitivité hors prix des produits français, *Actualités du Commerce Extérieur*, No. 44, p. 22-28, March-April 2002 (with J. Anas)

Working Papers

1. Common business and housing markets cycles in the euro area from a multivariate decomposition, *Working Paper Banque de France*, No. 275. (with S.J. Koopman, 2010)

2. Housing cycles in the major euro area countries, *Working Paper Banque de France*, No. 269 and *Occasional Paper Banco de Espana*, No. 1001 (with L. Alvarez, A. Cabrero, G. Bulligan and H. Stahl, 2009)

3. Cyclical relationships between GDP and housing market in France: Facts and factors at play, *Working Paper Banque de France*, No. 268 (with O. Vigna, 2009)

4. Forecasting euro area recessions using time-varying binary response models for financial variables, *Working Paper Banque de France*, No. 259 (with C. Bellégo, 2009).

5. Nowcasting Euro area GDP with ragged-edge data: A semi-parametric approach, Working Paper No. 2008.82, *Centre d'Economie de la Sorbonne* (with D. Guégan and P. Rakotomarolahy, 2008).

6. Identification of slowdowns and accelerations in the Euro area, *Working Paper* No. 239, Banque de France, June 2009 and *CEPR Discussion Paper* No. 7376, CEPR/EABCN No. 42/2009, July 2009 (with O. Darné, 2009).

7. Are disaggregate data useful for forecasting French GDP with dynamic factor models ?, *Working Paper,* No. 232, Banque de France, February 2009 (with K. Barhoumi and O. Darné, 2009).

8. Business surveys modelling with Seasonal-Cyclical Long Memory models, *Working Paper* No. 224, Banque de France, and Document de Travail No. 2008.35, Centre d'Economie de la Sorbonne, University Paris 1 (with D. Guégan, 2008)

9. « Monthly forecasting for French GDP: A revised version of the OPTIM model », *Working Paper* No. 222, Banque de France, (with K. Barhoumi, O. Darné et B. Pluyaud, 2008)

10. « A non-parametric method to assess the conditional nowcasted distribution of the Euro area IPI » Document de Travail No. 2008.33, Centre d'Economie de la Sorbonne (with T. Raffinot, 2008).

11. « Testing fractional order of long memory processes : A Monte-Carlo study », Document de Travail No. 2008.12, Centre d'Economie de la Sorbonne (with D. Guégan et Z. Lu, 2008)

12. « Business cycle analysis with multivariate markov-Switching models », University of Venice Ca' Foscari, Department of Economics, Working Paper No. 32, (2007; with M. Billio, J. Anas et M. LoDuca)

13. « A turning point chronology for the Euro-zone classical and growth cycles », University of Venice Ca' Foscari, Department of Economics, Working Paper No. 33, (2007; with M. Billio, J. Anas et M. LoDuca)

14. « Deux indicateurs probabilistes de retournement cyclique pour l'économie française » *Working Paper* No. 187, Banque de France, November 2007 (with M. Adanero-Donderis et O. Darné)

15. « A system for dating and detecting cycles in the euro area » paper presented at 4th Conference on Growth and Business Cycle in Theory and Practice, Manchester, July 2007 (with J. Anas, M. Billio and G.L. Mazzi)

16. « Un nouvel indicateur d'entrée et sortie de récession pour la zone euro», *Working Paper No. 72,* Centre d'Observation Economique, July 2006.

17. « A real-time recession index for the Euro area», *Working Paper,* Centre d'Observation Economique, July 2006.

18. « Price and Volume: Which one is the best to predict financial crisis? The case of some Asian and Latin America markets », *Working Paper 2006-5*, Centre d'Economie de la Sorbonne – Antenne Cachan, paper presented at *26rth International Symposium on Forecasting*, IIF, Santander, June 2006 (with D. Guégan and O. Mbiakoup).

19. « Fractional seasonality : Models and applications to economic activity in the Euro area », *Eurostat Working Paper*, paper presented at the *Conference for Seasonality, Seasonal Adjustement and their*

implications for Short-Term Analysis and Forecasting, organized by Eurostat, Luxembourg, May 2006 et *CES-AC Working Paper,* No. 2 - 2006 (with D. Guégan)

20. « Point and interval nowcasts of the euro area IPI », preprint No. 04-2005, IDHE-MORA, ENS-Cachan (2005).

21. « La compétitivité hors prix des biens de consommation sur le marché européen en 2004 », *Working Paper* No. 70*,* Centre d'Observation Economique, June 2005.

22. « The location of industrial activities after EU enlargement : A sectoral approach », paper presented at 2^{nd} *Euroframe Conference*, Vienne, Autriche, June 2005 (with A. Henriot).

23. « Real-time detection of economic cycles using a threshold model », preprint No. 12-2003, IDHE-MORA, ENS Cachan (with D. Guégan, 2004).

24. « L'image des biens intermédiaires et d'équipement sur le marché européen en 2003 », *Working Paper* No. 66, Centre d'Observation Economique (2004).

25. « Euro-zone business cycle analysis with multivariate Markov-Switching models», *Eurostat Working Paper,* paper presented at 4^{th} *Colloquium on Modern Tools for Business Cycle Analysis,* organisé par Eurostat-DG ECFIN, Luxembourg, October 2003 (with M. Billio, J. Anas et M. LoDuca)

26. « A turning point chronology for the Euro-zone classical and growth cycle», *Eurostat Working Paper,* paper presented at 4^{th} *Colloquium on Modern Tools for Business Cycle Analysis,* organisé par Eurostat-DG ECFIN, Luxembourg, October 2003 (with M. Billio, J. Anas et M. LoDuca)

27. « Characterization and forecast of turning points in economic cycles : An application to Latin America», paper presented at *International Symposium on Forecasting,* Merida, Mexique, June 2003 (with J. Anas)

28. « L'image des biens de consommation sur le marché européen en 2002 », *Working Paper* No. 63*,* Centre d'Observation Economique, July 2003.

29. « Un indicateur d'entrée et sortie de récession : Application aux Etats Unis », *Working Paper* No. 58*,* Centre d'Observation Economique (with J. Anas, 2002)

30. « Turning points detection », paper presented at $6^{ème}$ meeting *Euro-Indicators Working Group,* organisé par Eurostat, Luxembourg, 11-12 July 2002 (with J. Anas)

31. « L'image des biens intermédiaires et d'équipement sur le marché européen en 2001 », *Working Paper* No. 57*,* Centre d'Observation Economique (2002).

32. « L'image des biens de consommation sur le marché européen en 2000 », *Working Paper* No. 54*,* Centre d'Observation Economique (2001).

33. « Forecasting with k-factor Gegenbauer processes: theory and applications », *Working Paper,* University Paris 13 (with D. Guégan, 2000)

34. « Gegenbauer processes: Estimation and applications », *Working Paper CREST-INSEE* (with D. Guégan, 1999)

35. « Gegenbauer processes: Estimation and forecasting », in *Bulletin of the International Statistical Institute,* tome LVIII, book 1, ISI 99, Helsinki. (with D. Guégan, 1999)

Conferences and Workshops

April 2010 in Paris, Working Group on Risk, ESSEC Business School

Mars 2010 in Venice, Internal Seminar, Department of Econometrics, University Ca Foscari

Mars 2010 in Nantes, Workshop on Financial Econometrics, University of Nantes

December 2009 in Paris,Cconference *Macroeconomics of Housing Markets* jointly organised by Banque de France, Deutsche Bundesbank, Banca d'Italia and Banco de Espana.

November 2009 in Paris, Journées d'Econométrie, Université Paris-Ouest Nanterre

October 2009 in Paris, Internal Seminar Banque de France.

September 2009 in Antwerp, ECB Working Group on Forecasting.

September 2009 in Paris, AFSE Conference

June 2009 in Hong Kong, 29^{th} International Symposium on Forecasting

June 2009 in Paris, Macro-Peco seminar, DGTPE, French Ministry of Finance

June 2009 in Clamart, France, Electricité de France, Research-Development Internal Seminar

April 2009 in Paris, Internal Seminar Banque de France.

March 2009 in Frankfurt, 10th EABCN Workshop on Uncertainty over the Business Cycle.

March 2009 in Rome, 1rst Macroeconomic Forecasting Conference, ISAE-INSEE-IFO

October 2008 in Paris, International Workshop on Forecasting Macroeconomic Variables with Dynamic Factor Models, Banque de France

September 2008 in Roma, Italy, Workshop on Short-Term Forecasting Tools, Banca d'Italia

September 2008 in Aarhus, Danmark, NBER-NSF Conference

September 2008 in Luxembourg, Colloquium on Modern Tools for Business Cycle Analysis, Eurostat

September 2008 in Paris, Colloque AFSE

June 2008 in Nice, France, Invited Session Chairman, 28th International Symposium on Forecasting

December 2007, Organizer seminar Monnaie, Banque, Finance et Assurance, Centre d'Economie de la Sorbonne University Paris 1 : « Central Banking » (with L. Ferrara, O. De Bandt)

February 2007, Organizer Seminar Monnaie, Banque, Finance et Assurance, Centre d'Economie de la Sorbonne: « Non-linear models for business cycle analysis » (with L. Ferrara, R. Casarin et M. Lemoine)

June 2006 in Santander, Spain, *26rth International Symposium on Forecasting*, IIF, Session chairman.

May 2006 in Luxembourg, *Conference for Seasonality, Seasonal Adjustement and their Implications for Short-Term Analysis and Forecasting,* Eurostat.

June 2005 in Paris, Working Group on French External Trade, Conseil d'Analyse Economique by the Prime Minister.

March 2005 in Brussels, *Economic Seminar*, European Commission DG-EcFin.

February 2005 in ENS Cachan, *International Workshop on Forecasting in Finance*, IDHE-MORA

September 2004 in Paris, *Forum Economique International*, Fédération des Industries Mécaniques

November 2003 in l'ENS Cachan, *International Workshop on Models with Breaks in Economics and Finance*.

October 2003 in Luxembourg, *4th Colloquium on Modern Tools for Business Cycle Analysis*, Eurostat.

September 2003 in Frankfurt, Germany, Internal seminar European Central Bank.

June 2003 in Merida, Mexique, *23rd International Symposium on Forecasting*, IIF.

November 2002 in Luxembourg, *3rd Colloquium on Modern Tools for Business Cycle Analysis*, Eurostat

October 2002 in Taipei, Taiwan, *26th CIRET Conference.*

October 2002 at ENS Cachan, *Seminar MORA Team.*

July 2002 in Luxembourg, *Euro-Indicators Working Group, 6th* Meeting, organised by Eurostat.

February 2002 at University Paris 13, *Séminaire de Probabilités-Statistiques Paris Nord.*

June 2000 in Lisbon, Portugal, *20th International Symposium on Forecasting*, organised by IIF.

May 2000 in London, UK, *7th International Conference on Forecasting Financial Markets.*

April 2000 in Aix en Provence, *Colloque des Jeunes Economètres 2000.*

January 2000 in Reims, Seminar of Statistics, University de Reims – Champagne,

May 1999 in London, UK, *6th International Conference on Forecasting Financial Markets.*

May 1999 in Grenoble, *31èmes Journées de Statistique*, organised by Société Française de Statistique.

December 1998 at ENSAE, Paris, *Statistical Seminar CREST-INSEE.*

November 1998 in Marseille, *19èmes Rencontres Franco-Belges de Statisticiens*

Scientific Activities

Colloquium Organization :

- Co-organizer of the conference on *Macroeconomics of Housing Markets* jointly organised by Banque de France, Deutsche Bundesbank, Banca d'Italia and Banco de Espana, December 2009
- International Workshop on Forecasting Macroeconomic Variables with Dynamic Factor Models, Banque de France, October 2008
- Program co-chair 28th International Symposium on Forecasting, Nice, June 2008
- Lecture of Pr. Timo Teräsvirta (Aarhus University, Danmark) « Smooth transition regression models in economics », Banque de France, April 2008
- Seminar Monnaie, Banque, Finance et Assurance Centre d'Economie de la Sorbonne University Paris 1 : « Les banques centrales en action » (O. De Bandt, L. Ferrara), December 2007
- Seminar Centre d'Economie de la Sorbonne, ENS Cachan – Univ. Paris 1 : « Non-linear models for business cycle analysis » (L. Ferrara, R. Casarin et M. Lemoine), February 2007

Scientific associations:

EABCN Fellow, Société Française de Statistiques (SFdS), International Institute of Forecasters (IIF), Association Française de Sciences Economiques (AFSE)

Referee for international academic journals:

Oxford Bulletin of Economics and Statistics, Journal of Forecasting, Economie et Prévision, Louvain Economic Review, Empirical Economics, Statistics, Annales d'Economie et Statistiques, Comptes-Rendus de l'Académie des Sciences, *Journal of Business Cycle Measurement and Analysis*, and the editor *De Boeck*.

Students supervision:

MSc ENSAE, « Forecasting recessions with financial variables », June 2009
MSc Monnaie Banque Finance University Paris 1, « Leading Indicators », September 2007
MSc Finance and Econometrics University Paris 2, « GARCH Processes and Bootstrap », June 2005
MSc Finance and Econometrics University Paris 2, « Regime-dependent GARCH Processes», June 2005
MSc Engineer School ISPG « Forecasting the French IPI with Bootstrap », July 2004.
MSc Macro-economics University Paris 1, « Multivariate Markov-Switching Models », June 2003.

Languages

French (mother tongue)
English (Excellent)
German (Reading skills)
Italian (Reading skills)