Matteo Bondesan



LinkedIn : Matteo's profile Academic Website : Matteo @ UniTo/CCA Personal Website : available soon . . . Personal : mateo.bondesan@gmail.com Academic : matteo.bondesan@carloalberto.org IOSCO : m.bondesan@iosco.org Mobile : + 39 347...... Born : April 28 Nationality : Italian

Current Position

PhD Candidate, Ph.D. Program in Economics (Vilfredo Pareto), University of Turin and Collegio Carlo Alberto, Italy.

PhD Intern, International Organization of Securities Commissions (IOSCO), General Secretariat, Madrid, Spain.

Areas of Interest

Macroeconomics, Monetary Policy, Macroeconometrics

My research investigates the transmission mechanism of monetary and fiscal policy with unanchored expectations and heterogeneous agents using HANK- and VAR-type modeling.

Education

2022 -	<i>PhD Candidate</i> , Ph.D. Program in Economics (Vilfredo Pareto), University of Turin and Collegio Carlo Alberto, Torino, Italy.
2021	M.A. in Econometrics and Quantitative Economics (STEM), GPA 3.591/4.0, Department of Economics, Emory University, Atlanta, USA.
2018 - 2021	Рн.D. in Economics (STEM), All but dissertation (ABD), Department of Economics, Emory University, Atlanta, USA.
2014 - 2015	M.A. in Economics, Second-level Master Degree, Collegio Carlo Alberto, Turin, Italy.
2012 - 2014	M.Sc. in Economics, 110/110 Summa cum laude with distinction, University of Turin, Turin, Italy.
2009 - 2012	B.Sc. in Economics & Trade (Economia & Commercio), University of Turin, Italy.
2011, Spring	ERASMUS in Economics, University Carlos III de Madrid, Madrid, Spain.
2015	SUMMER SCHOOL in Computational Econometrics (SEEC), Applied Macroeconomics, Università del Salento, Lecce, July 27th-31th. Matlab-based course: VAR Analysis of Monetary Policy, State-Space Models and the Kalman Filter, Time-varying VARs.

Work Experience

PROFESSIONAL POSITIONS

- ²⁰²² *PhD Intern*, International Organization of Securities Commissions (IOSCO), General Secretariat, Madrid, Spain.
- 2022 Oversight Specialist, European Central Bank, Directorate General Market Infrastructure and Payments,
 ¹ Year Oversight Division, Securities & Derivatives Section, Frankfurt.
- Analyst, European Central Bank, Directorate General Market Infrastructure and Payments, Oversight
 ¹Year Division, Securities & Derivatives Section, Frankfurt.
- ^{2017,} Trainee, European Central Bank, Directorate General Market Operations, Market Operations
 ¹Year Analysis Division, Financial Markets & Collateral Section, Frankfurt.

²⁰¹⁶, Trainee, European Investment Bank, Economics Department, Country & Financial Sector Studies
 ^{4 Months} Division, Luxembourg.

2015, *Consultant*, Sinloc SpA, Private Equity Firm, Turin and Padua, Italy. 8 Months

Academic Positions

2018 - 2021	Ph.D. Student, Department of Economics, Emory University, Atlanta, USA
2021, Summer	<i>Instructor</i> , Intermediate Macroeconomics, Department of Economics, Emory University, Atlanta, USA
2020 - 202I	<i>Research Assistant</i> , Professor Elena Pesavento, Department of Economics, Emory University, Atlanta, USA
2021, Spring	<i>Teaching Assistant</i> , Stocks, Bonds and Financial Markets (Undergraduate level), Dr. Kelli Lanier, Department of Economics, Emory University, Atlanta, USA
2021, Spring	<i>Teaching Assistant</i> , Behavioral Economics (Undergraduate level), Dr. Kelli Lanier, Department of Economics, Emory University, Atlanta, USA
2020, Fall	<i>Teaching Assistant</i> , Intermediate Macroeconomics (Undergraduate level), Professor Juan Rubio- Ramírez, Department of Economics, Emory University, Atlanta, USA
2020, Fall	<i>Co-Instructor and Teaching Assistant</i> , Quantitative Methods II (Graduate level), Professor Daniel Levy, Department of Economics, Emory University and Bar-Ilan University, Atlanta, USA
2020, Summer	<i>Co-Instructor and Teaching Assistant</i> , Quantitative Methods I (Graduate level), Professor Daniel Levy, Department of Economics, Emory University and Bar-Ilan University, Atlanta, USA
2020, Summer	<i>Research Assistant</i> , Professor Timothy J. Dowd (Department Chair), Department of Sociology, Emory University, Atlanta, USA
2019, Spring	<i>Teaching Assistant</i> , Industrial Organization (Undergraduate level), Professor Prof. Maria Arbatskaya, Department of Economics, Emory University, Atlanta, USA
2019, Spring	<i>Teaching Assistant</i> , Business and Government (Undergraduate level), Professor Prof. Maria Arbatskaya, Department of Economics, Emory University, Atlanta, USA
2015, Spring	<i>Research Assistant</i> , Center for Research on Pensions and Welfare Policies, Collegio Carlo Alberto, Turin, Italy
2015, Spring	<i>Teaching Assistant</i> Intermediate Macroeconomics (Undergraduate level), University of Turin, Professor Elsa Maria Fornero, Turin, Italy

Grants, Honors & Awards

Awards & Fellowships

2022 - University of Turin PhD Scholarship (Borsa di Studio per Dottorato di Ric
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- 2018 Laney Graduate School Scholarship and Fellowship, Emory University, United States of America
- ²⁰¹⁵ Vincezo Porri Award, University of Turin, Italy. During the same academic year, I won two additional scholarships: Domenico Borello and Giovanni Giolitti scholarship. However, I was able to accept only one prize because of legal incompatibility to receive more than one scholarship per year issued by the same institution
- ²⁰¹⁴ Scholarship in the form of full-tuition waiver, Collegio Carlo Alberto, Italy
- Lions Club Award, Lions Club Biella la Serra, Italy
- 2011 Erasmus Scholarship, Carlos III University in Madrid

Coding

2026

2021

- Program- MATLAB, Dynare, Robotic Process Automation (RPA), Gauss, Python, R, Julia, SQL, VBA, ^{ming} GitHub, C++, Fortran, MTFX
- Softwares Stata, Eviews, Tableau, Sublime, Netlogo, Gretl, Microsoft Office
- Databases ECB Consumer Expectations Survey (CES), European Market Infrastructure Regulation (EMIR), Money Market Statistical Reporting (MMSR), Target2-Securities (T2S), American Survey of Consumer Finances (SCF), European Household Finance and Consumption Network (HFCN), Italian Survey on Household Income and Wealth (SHIW), ECB Statistical Data Warehouse, Bloomberg, BIS statistics, Federal Reserve Economic Data (FRED), OECD Data, World Bank Open Data, Thomson Reuters Market data and analytics

International Conferences

- ²⁰²² 16th South-Eastern European Economic Research Workshop, Central Bank of Albania, In-Person, December 5-6th, Albania. Role: Presenter, Discussant, and Chair.
- ²⁰²¹ 92nd International Atlantic Economic Conference, International Atlantic Economic Society (IAES), Virtual, October 7-10th, USA. Role: Presenter, and Discussant.
- 2015 *Workshop on Applied Macroeconomics and Labour Economics*, International Network for Economic Research (INFER), Pablo de Olavide University, Seville, November 5-6th, Spain
- 2015 The Euro Crisis: Where Do We Stand?, Macroeconomics Workshop, BETA University of Strasbourg, October 16th, France

- 2015 Balancing high sustainable Growth and Macroeconomic Stability, 9th International Conference, Central Bank of Indonesia, Jakarta, August 6th, Indonesia
- 2015 *Annual Meeting of the Austrian Economic Association*, Nationalökonomische Gesellschaft Österreichs (NOeG), Alpen-Adria-Universität Klagenfurt, June 5–6th, Austria
- ²⁰¹⁵ *The Great Recession: Moving Ahead*, Money and Finance Workshop, Rimini Centre for Economic Analysis, May 21st–22nd, Italy

Memberships

- ²⁰¹⁷ Italian Society of Econometrics (SIdE)
- ²⁰¹⁵ International Network for Economic Research (INFER)

Publications, Talks & Competitions

WORKING PAPERS

²⁰²¹ Title: Monetary Policy in a Continuous-time Adaptive Learning Heterogeneous-Agent New Keynesian Economy

Abstract. This paper introduces adaptive learning (AL) dynamics into a New Keynesian model with heterogeneous agents in a continuous-time setting. I developed a set of adaptive learning MATLAB routines to model a recursive least-square approach to solving heterogeneous-agent continuous-time (HACT) models under both AL and RE using a diffusion process to model productivity. Learning dynamics are instilled into the model by extending recent advances in the representative-agent adaptive learning literature in continuous-time to an heterogeneous-agent framework. The explicit usage of the Hamilton-Jacobi-Belmann (HJB) and Kolmogorov Forward equations (KF) as solution methods creates a natural link to the Heterogeneous Agent New Keynesian (HANK) modeling environment. A continuous-time approach enables the provision of a higher level of information about the distribution of key variables with respect to discrete-time models. Preliminary results show the behaviors in terms of optimal saving policy functions under AL and RE. Also, important differences arise in terms of the structure of the economy under AL and RE, which is represented by the probability density functions intertwining productivity, wealth, and savings. Upon adding aggregate shocks to the model, this paper studies the effects of monetary policy shocks in a simplified version of the canonical two-asset HANK model, namely a one-asset HANK model with no capital and AL behaviors by heterogeneous agents. Given the computational simplicity of a one-asset HANK model, the introduction of learning dynamics may attenuate the tension between matching the high aggregate wealth-to-output ratios observed in the data and generating a significantly large marginal propensity to consume, together with producing a hump-shaped impulse response functions for consumption to a monetary policy shock.

European Central Bank's Talks

- ²⁰²² Empirical time-series regression analysis to study the impact of volatility on Target 2 Securities (T2S) traffic using aggregate T2S and money market statistical reporting (MMSR) data, together with volatility indexes, macroeconomic and financial variables. This work has been presented to two Eurosystem fora, namely, the Analytical working group (AWG) and the Payment Systems Oversight working group (PSOWG). This is joint work with Simonetta Rosati.
- ²⁰¹⁶⁻²⁰¹⁸ My team and I worked on various quantitative research projects, e.g. a study on the relocation ²⁰²² cost of Euro-denominated derivatives to EU CCPs after Brexit, a fully automated monitoring tool of the centrally-cleared derivative market, and a monthly dashboard to supervise the activity of the European Central Banks of Issue (CBI). In several occasions I had the chance to present our preliminary and final results to various Working Groups and Policy Committees, such as the Central Counterparties Working Group (CCPWG), the Analytical Working Group (AWG), the Payment Systems Oversight Working Group (PSOWG), the Working Group on Monetary and Exchange Rate Policy Implementation Framework (WGME), and the Market Infrastructure and Payments Committee (MIPC).
- 2018 Relocating Euro-denominated clearing business from the UK: estimating the impact on EU banks' initial margin cost, with Dr. Argyris Kahros (ECB, IMF). Coded in R & Stata. Topics in financial economics. CCPs, Trade Repositories & Derivative Market data.

<u>Abstract.</u> European Market Infrastructure Reguglation (EMIR) data on initial margins, CCPs, trade repositories, and derivatives were used to study the impact of relocating Euro-denominated clearing business outside the UK after the Brexit deal. We estimated the impact on EU banks' initial margin cost, after the Brexit deal. The model was written up in R and Stata on the basis of real-world calculations used in practice by CCPs, while the derivative data were fetched using Bloomberg. On the other hand, the financial and macroeconomic dataset was constructed using EMIR, CCPs, and Trade Repositories data. It is worth mentioning that CCPs and Trade Repositories data are fairly complex in their structure as they count approximately 1.2 billion non-unique observations.

JOURNAL ARTICLES

²⁰¹⁵ The bank lending channel in monetary transmission in the euro area: evidence from Bayesian VAR analysis, Bulletin of Monetary Economics and Banking. Department of Statistics, Central Bank of Indonesia, Jakarta

Newspaper articles

²⁰¹⁴ "Shale Gas: a recent American revolution" (in Italian), *Quadrante Futuro*, Prof. Mario Deaglio, Centro di Ricerca e Documentazione Luigi Einaudi, Ersel

UNIVERSITY PROJECTS

^{2020,} The Oregon's heath insurance lottery experiment: a Lassologit analysis, Advanced Econometrics
 ^{Fall} Methods, Economics Department, Emory University. Supervisor: Dr. Ruixuan Liu

- A Machine Learning approach to seizure detection and prediction using intra-cranial EEG data,
 with Chloe Lee and Vicki Huang. Machine Learning, Computer Science Department, Emory
 University. Supervisor: Dr. Babak Mahmoudi
- ²⁰¹⁴ The impact on income of the 2009 L' Aquila earthquake in Italy: evidence from Difference and Differences analysis. Coded in Stata (Applied Economics), Micro-data. Supervisor: Dr. Ainhoa Fenoll
- ²⁰¹⁴ *The impact of water on child labour and education in Tanzania*. Coded in Stata. Growth & development economics. World Bank micro-data. Supervisor: Prof. Maria Cristina Rossi
- 2014 The bank lending channel in monetary transmission in the euro area: evidence from Bayesian VAR analysis. Coded in Eviews & Matlab. Monetary economics, Macro-data. Supervisors: Prof. Fabio Cesare Bagliano, Prof. Davide Vannoni
- Apprenticeship vs. stage contract: what is the probability to have a job in Italy?, Labor economics (Micro-data). M.Sc's thesis. Coded in Stata, Gretl & Eviews. Supervisors: Prof. Michele Tiraboschi. Association for International and Comparative Studies in the field of labour law and industrial relations (ADAPT), Bergamo, Italy
- 2013 *A simulation exercise: three games approach.* Coded in Python. Simulation for Economics. Supervisor: Prof. Pietro Terna
- ²⁰¹³ *A better place to live: employment, growth and migration.* Coded in Netlogo. Simulation for Economics. Supervisor: Prof. Pietro Terna
- ²⁰¹² *The macroeconomics of the stock market: a random walk.* B.Sc dissertation. Macroeconomics. Supervisor: Prof. Margherita Borella

Competitions

- Rotman European Trading Competition (RETC), LUISS Guido Carli University in Rome. RETC is a three-day invitational event that allows teams from schools across Europe to participate in a simulated market. I was the University of Turin's team leader. Supervisor: Professor Giovanna Nicodano
- ²⁰¹¹ Invitational seminar: *Europe, the day after*, Berlin, Germany
- Invitational seminar for one of the best historical essay in Piedmont, Italy. The seminar consisted
 of a four-day workshop on European economical and political issues
- 2007, Invitational event: advance course in mathematics, Pracatinat, Italy 2008

Languages

Native Italian C1 English

B₂ Spanish

A1 French, German

References

Academic

Fabio Cesare Bagliano, Professor, Department of Economics, University of Turin and Collegio Carlo Alberto, Turin, fabio.bagliano@unito.it

Luca Gambetti, Professor, Department of Economics, Universidad Autonoma de Barcelona, University of Turin and Collegio Carlo Alberto luca.gambetti@carloalberto.org

Daniel Levy, Professor, Department of Economics, Bar-Ilan University, Israel, Daniel.Levy@biu.ac.il; Visiting Professor, Department of Economics, Emory University, Atlanta daniel.levy@emory.edu

Daniel Waggoner, Research Economist and Policy Advisor, Research Department, Federal Reserve Bank of Atlanta, daniel@danielwaggoner.net

Elsa Maria Fornero, Professor (Retired), Department of Economics, University of Turin and Collegio Carlo Alberto, Turin, elsa.fornero@unito.it

Professional

Simonetta Rosati, Head of Division, Securities & Derivatives Oversight, European Central Bank, Frankfurt, Simonetta.Rosati@ecb.europa.eu

Fiona Van Echelpoel, Deputy Director General, Market Infrastructure & Payments, European Central Bank, Frankfurt, Fiona.van_Echelpoel@ecb.europa.eu

Benjamin Sahel, Head of the Market Operations Analysis Division, Directorate General Market Operations, European Central Bank, Frankfurt, Benjamin.Sahel@ecb.europa.eu

Ad Visser, Head of the Financial Markets & Collateral Section, Directorate General Market Operations, European Central Bank, Frankfurt, Ad.Visser@ecb.europa.eu

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