Giulia Mantoan

University of Warwick
Warwick Business School (WBS)
Scarman Rd., Coventry, CV4 7AL - UK
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Phone: +44 07465-202085
E-mail: giulia.mantoan.16@mail.wbs.ac.uk

EDUCATION

Ph.D. in Finance and Econometrics 2016-2020
Economic Modelling & Forecasting group
University of Warwick, Warwick Business School (WBS)
Supervisors: Prof. Ana Galvão and Prof. James Mitchell

M.S. in Models and Methods for Economics 2013-2015

Ca' Foscari University (Italy)
Supervisor: Prof. Roberto Casarin.

B.S. in Economics, Ca' Foscari University (Italy) 2010-2013
Supervisor: Prof. Stefano Magrini.

RESEARCH INTERESTS

Primary: Bayesian Econometrics, Forecasting
Secondary: Macroeconomics, Monetary policy

PUBLICATIONS

- "Bayesian Calibration of Generalized Pools of Predictive Distributions" (2016), with R. Casarin and F. Ravazzolo, **Econometrics**, 4(1), p.17.

WORK IN PROGRESS

- "Optimal Pooling and Finite Mixture Distribution Combinations of Probabilistic Forecasts".
- "Are Central Banks' Fancharts Reliable? On Calibration of Density Path Forecasts"
- "Quantile-specific Combination of Density Forecast"

PRESENTATIONS AT CONFERENCES

2018 Computational and Financial Econometrics Conference (CFE), Pisa (Italy)
NBP Workshop on Forecasting, Narodowy Bank Polski (NBP) Warsaw (Poland)
2019 International Association for Applied Econometrics Conference (IAAE), Nicosia (Cyprus)
72nd European Meeting of the Econometric Society (ESEM), Manchester (UK)

AWARDS

2016-2020 Ph.D. scholarship from Warwick Business School.

2016-2020 Ph.D. scholarship from Economic and Social Research Council (ESRC).

2016 Riccardo Faini Award for the best master thesis (Ca' Foscari).

TEACHING EXPERIENCE

2017-2018 University of Warwick, UK
2018-2019 *Teaching Assistant*
Advanced Econometric Theory - Ph.D. students in Economics - Module leader: Dr. Giovanni Ricco.

2017-2018 University of Warwick, UK
2018-2019 *Teaching Assistant*
Quantitative Methods for Finance - Master students - Module leader: Prof. Cesare Robotti (2018-2018), Prof. Anthony Garratt (2018-2019).

2017-2018 University of Warwick, UK
Teaching Assistant
Global Integrative Project – Module leader: Dr. Frederik Dahlmann.

PROFESSIONAL AND ACADEMIC EXPERIENCE

2015-2016 Prometeia SPA, Italy
Junior Economist, Financial Markets Analysis Unit
Prometeia is an outstanding leader in the private sector for research and forecasting. My main role was developing models for estimation and forecasts for the Italian and European banking financial institutions.

2015 Univerisit Paris 1 Panthon Sorbonne, France
Visiting Student
Modules in Population Economics and Labour Economics, French course (level B2).

2015 Harvard National Model United Nations 2015 edition; Boston, Massachusetts
As part of the Ca Foscari delegation, I represented Armenia at the United Nations Model in the Disarmament and International Security Committee in Boston.

2014 CFA Institute Research Challenge 2014; Milan, Italy.
As part of the Ca Foscari team, I participated in the 2014 edition of the global competition.
In particular, I built a macro analysis of Luxury Market.

LANGUAGES

English (fluent), Italian (native) and French (basic)

PROGRAMMING SKILLS

MATLAB, Stata, R, LaTeX.

PERSONAL INFORMATION

Full name: Giulia Mantoan
Date of birth: 29/Mar/1991
Citizenship: Italian

Optimal Pooling and Finite Mixture Distribution:
a Comparison between Approaches to Density Forecast Combination

The combination of two or more density forecasts entails a long tradition the statistics and forecasting literature. However, little attention in econometrics has been given to the finite mixture distribution as a statistical model for combining density forecasts. Combination procedures based on a mixture density distribution are able to account for parameter uncertainty in addition to weights uncertainty, which are features normally not considered in the traditional "two-step" approaches. The aim of this paper is to compare the "one-step" mixture approach with a more traditional "two step" approach for combining density forecasts. The comparison has been achieved with several Monte Carlo simulations and applications. From the comparison, the "two-step" set of procedures result to be more accurate in combining density forecasts when the sample size is small, the individual models are nonnested or when the number of forecasts to combine is high. The "one-step" is more accurate in combing density forecasts when the sample size is big enough, the individual models are nested, when data presents breaks or when the number of forecasts to combine is low.

Bayesian Calibration of Generalized Pools of Predictive Distributions,
with Prof. R. Casarin (Ca' Foscari University) and Prof. F. Ravazzolo (Free University of Bozen-Bolzano)

Decision-makers often consult different experts to build reliable forecasts on variables of interest. Combining more opinions and calibrating them to maximize the forecast accuracy is consequently a crucial issue in several economic problems. This paper applies a Bayesian beta mixture model to derive a combined and calibrated density function using random calibration functionals and random combination weights. In particular, it compares the application of linear, harmonic and logarithmic pooling in the Bayesian combination approach. The three combination schemes, i.e., linear, harmonic and logarithmic, are studied in simulation examples with multimodal densities and an empirical application with a large database of stock data. All of the experiments show that in a beta mixture calibration framework, the three combination schemes are substantially equivalent, achieving calibration, and no clear preference for one of them appears. The financial application shows that the linear pooling together with beta mixture calibration achieves the best results in terms of calibrated forecast.