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Personal information

Date of Birth: 10 March 1983
Nationality: Italian

Education

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| 09/2008 – present | Ph.D. Candidate in Economics , European University Institute (EUI), Florence, Italy.
Degree expected: August 2012.
Supervisor: Prof. Massimiliano Marcellino.
Second supervisor: Prof. Helmut Lütkepohl. |
| 09/2008 – 07/2009 | Master of Research in Economics , European University Institute (EUI), Florence, Italy. |
| 09/2005 – 07/2007 | Master of Science in Economics and Social Sciences , Bocconi University, Milan, Italy.
Final Mark: 110/110 cum laude. |
| 08/2006 – 12/2006 | Exchange Program , Stockholm School of Economics, Stockholm, Sweden. |
| 09/2002 – 07/2005 | Degree in Economics and Social Sciences , Bocconi University, Milan, Italy.
Final Mark: 110/110 cum laude. |

Teaching experience

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| Spring 2010, Spring 2011 | Topics in Time Series Analysis – Ph.D. level, European University Institute (EUI), Teaching Assistant for Prof. M. Marcellino |
| Spring 2008 | Microeconomics – Undergraduate level, Bocconi University, Teaching Assistant for Prof C. Filippini |
| Fall 2007, Spring 2008 | Econometrics – Undergraduate and Master level, Bocconi University, Teaching Assistant for Prof. M. Marcellino |

Research experience and other employment

06/2011 – present	Robert Schuman Centre for Advanced Studies (RSCAS), Florence, Research Assistant.
01/2011 – 03/2011	Deutsche Bundesbank, Frankfurt am Main, Ph.D. Intern in the Research Department.
04/2010 – 12/2010	European University Institute (EUI), Florence, Research Assistant for Prof. M. Marcellino.
01/2007 – 12/2007	UniCredit, Milan, Consultant in the Global Economics Research Team.

Research interests

Time Series Models for Mixed-Frequency Data, State-Space Models, Forecasting, Macroeconometrics, Applied Macroeconomics.

Teaching interests

Econometrics, Time Series Analysis, Applied Macroeconomics.

Honours, Scholarships and Fellowships

09/2011 – present	European University Institute, Fourth Year Completion Grant.
09/2008 – 08/2011	Italian Ministry of Foreign Affairs, Scholarship.

Conference Presentations

EUI Third Year Forum (2011).
EUI Time Series Working Group (2010 – 2011).
EUI Second Year Forum (2010).

Research Papers

The use of mixed-frequency data to identify structural models (Job Market Paper).

A comparison of mixed-frequency approaches for modelling Euro area macroeconomic variables (with M. Marcellino).

U-MIDAS: MIDAS regressions with unrestricted lag polynomials (with M. Marcellino and C. Schumacher).

A survey of econometric methods for mixed-frequency data.

Skills

Languages: Italian (mother tongue), English (fluent), French (basic), Spanish (basic).

Computer skills: E-Views, Gauss, JMulti, Matlab, Mathematica, Ox, Stata, Ms Office, Latex, Scientific Workplace, Bloomberg, Datastream, Reuters.

Job Preferences

Academia, Institutions.
Available from September 2012.

References

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Paper Abstracts

The use of mixed-frequency data to identify structural models. (Job Market Paper)

This paper examines how time aggregation affects the identification of a structural model in which agents act at a frequency higher than the one in which all the data are available. We first show the analytical mapping from a monthly to a quarterly specification of simple SVAR and DSGE models. In both cases, we illustrate that it is impossible to identify the parameters which describe the monthly process when using quarterly data. Second, we focus on how mixed-frequency data can alleviate the temporal aggregation bias and mitigate the identification issue. Our examples of structural monetary policy models analytically illustrate the temporal aggregation bias and the consequent loss of identification. We then investigate how these problems are relevant in practice, and we run empirical exercises with both simulated and US data. We estimate the SVAR and DSGE models with quarterly aggregated data, and compare these results to those obtained by taking into account mixed-frequency data. The empirical results support our theoretical evidence of a temporal aggregation bias. Moreover, they also show that mixed-frequency data alleviate identification issues. As a final contribution, we provide a general estimation method to take into account mixed-frequency data in a structural context, within the classical maximum likelihood framework.

A comparison of mixed-frequency approaches for modelling Euro area macroeconomic variables. (with M. Marcellino)

Forecast models that take into account unbalanced datasets have recently attracted substantial attention. In this paper, we focus on different methods proposed so far in the literature to deal with mixed-frequency and ragged-edge datasets: bridge equations, mixed-data sampling (MIDAS), and mixed-frequency (MF) models. We discuss their performance on now- and forecasting the quarterly growth rate of Euro area GDP and its components, using a very large set of monthly indicators taken from Eurostat dataset of Principal European Economic Indicators (PEEI). We both investigate the behavior of single indicator models and combine first the forecasts within each class of models and then the information in the dataset by means of factor models, in a pseudo real-time framework. Anticipating some of the results, MIDAS without an AR component performs worse than the corresponding approach which incorporates it, and MF-VAR seems to outperform the MIDAS approach only at longer horizons. Bridge equations have overall a good performance. Pooling many indicators within each class of models is overall superior to most of the single indicator models. Pooling information with the use of factor models gives even better results, at least at short horizons. A battery of robustness checks highlights the importance of monthly information during the crisis more than in stable periods. Extending the analysis to a real-time context highlights that revisions do not influence substantially the results.

U-MIDAS: MIDAS regressions with unrestricted lag polynomials. (with M. Marcellino and C. Schumacher)

Mixed-data sampling (MIDAS) regressions allow to estimate dynamic equations that explain a low-frequency variable by high-frequency variables and their lags. When the difference in sampling frequencies between the regressand and the regressors is large, distributed lag functions are typically employed to model dynamics avoiding parameter proliferation. In macroeconomic applications, however, differences in sampling frequencies are often small. In such a case, it might not be necessary to employ distributed lag functions. In this paper, we discuss the pros and cons of unrestricted lag polynomials in MIDAS regressions. We derive unrestricted MIDAS regressions (U-MIDAS) from linear high-frequency models, discuss identification issues, and show that their parameters can be estimated by OLS. In Monte Carlo experiments, we compare U-MIDAS to MIDAS with functional distributed lags estimated by NLS. We show that U-MIDAS performs better than MIDAS for small differences in sampling frequencies. On the other hand, with large differing sampling frequencies, distributed lag-functions outperform unrestricted polynomials. The good performance of U-MIDAS for small differences in frequency is confirmed in an empirical application on nowcasting Euro area and US GDP using monthly indicators.

A survey of econometric methods for mixed-frequency data.

Econometric methods that can handle unbalanced datasets have recently attracted substantial attention. In this paper we review the main approaches proposed so far in the literature to deal with mixed-frequency data, possibly with ragged edges due to publication delays: aggregation, bridge-equations, mixed-frequency VAR (MF-VAR) and factor models, and the more recent mixed-data sampling (MIDAS) approach. After discussing and comparing the theoretical properties of the different models, we survey the main empirical applications, and identify the main achievements and still open questions in this literature.

Last Update: November 2011