Professor of Econometrics

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Personal

Office, Dipartimento di scienze economiche e aziendali (DEM), Via San Felice, 5 - 27100 Pavia, Italy, Tel. ++39 0382 986 207.

Fax +39 0382 304 226

ORCID, https://orcid.org/0000-0003-3597-8060.

Scopus Author ID, 26650162000.

National Scientific Qualification to full professor (ASN), SC 13/A5 Econometria, 13/D2 Statistica economica.

Current position

Full Professor of Econometrics, University of Pavia, Italy, SECS-P05.

Head of the Department of Economics and Management, *University of Pavia*, Italy.

Education

1988 **Laurea**, Discipline Economiche e Sociali, Bocconi University, Milan, Italy, Summa cum Laude.

1992 Master of Arts in Economics, Catholic University of Louvain, Belgium, Grande Distinction.

Applications of bootstrap to ARCH-GARCH models for financial time series

supervisor Wolfgang Haerdle

1993 PhD in Economics, University of Rome "La Sapienza", Italy.

title Volatilità dei tassi di cambio: un'analisi econometrica con modelli a varianza variabile

supervisor Carlo Giannini

Fellowships

1994 Research Fellowship, Bocconi University, Milan, Italy.

Visiting positions

1998–1999 Visiting Scholar, Dept of Economics, Duke University, Durham, NC.

- 2009 Visiting Scholar, Center of Econometric Analysis (CEA), Cass Business School, London, UK.
- 2012 Visiting Professor, Moscow School of Economics, Moscow, Russia.

Professional Employment History

- 2019-present Full Professor of Econometrics, University of Pavia, Italy.
 - 2002–2019 Associate Professor of Econometrics, University of Pavia, Italy.
 - 2015–2017 **Senior research officer**, Joint Research Centre, Finance and Economy Unit, European Commission, Ispra, Italy.
 - 1995–2002 Assistant Professor of Econometrics, University of Pavia, Italy.

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Research Interests

Financial Econometrics, Time Series Econometrics, Panel factor models.

Teaching experience

Undergraduate

- 2002-present **Econometrics**, University of Pavia.
 - 2002–2009 Macroeconometrics, University of Pavia.
 - 1999–2004 Financial Economics, University of Pavia.
 - 1999–2004 Econometrics of financial markets, University of Pavia.
 - 1992–1995 Microeconomics and Macroeconomics, Libero Istituto Universitario Cattaneo (LIUC), Castellanza, Italy.

Master

- 2002-present Financial econometrics, University of Pavia.
 - 2010–2016 **Econometrics for financial markets**, Master in Quantitative Finance, MIP, Politecnico di Milano, Milan, Italy.
 - 1999–2009 **Econometrics**, Master in Finance, CORIPE Piemonte, Turin, Italy.
 - 1999-2009 **Econometrics for financial markets**, *Master in Finance*, CORIPE Piemonte, Turin, Italy.
 - 2005–2008 **Econometrics**, Master in Cooperation and International Economic Integration, Istituto Universitario di Studi Superiori (IUSS), Pavia, Italy.
 - 2001–2005 **Econometrics II**, Master in Economics, CORIPE Piemonte, Turin, Italy.
 - 2005 **Economic Modelling, Analysing and Forecasting**, Istituto Universitario di Studi Superiori (IUSS), Pavia, Italy.

PhD

2018–present Director of the doctoral program in Economics organized by Pavia (jointly with the University of Milan), Department of Economics and Management.

- 2011-present Faculty member of the doctoral program in Economics organized by Pavia (jointly with the University of Milan), Department of Economics and Management.
 - 2003–2011 Faculty member of the doctoral program in Economics, organized by the Department of Economics and Management, University of Pavia.
 - 2010–2012 **Financial econometrics**, Centro Interuniversitario di Econometria (CIdE), Bertinoro, Italy.
- 2003-present **Econometrics**, *PhD in Economics*, University of Pavia.
- 2003-present **Time series econometrics**, PhD in Economics, University of Pavia.

PhD supervisions

- 2006 Dean Fantazzini, Theory and Applications of Copulas in Finance.
- 2007 Luca Agnello, Analyzing U.S. Monetary Policy over the last two decades: some empirical evidence.
- 2010 Paolo Santucci de Magistris, Essays on Fractional Cointegration Analysis and Applications in Finance.
- 2016 Marie Silvere Mbome, Essays on macroeconomic vulnerability financial development and economic growth.
- 2017 Andrea Bucci, Un modello con variabili esogene per la matrice delle covarianze realizzate.
- 2017 Xingzhi Yao, External examiner, Lancaster Management University.

Administrative Experience

- 2012-2015 Member of the Department's Steering Committe.
- 2005-2012 Member of the Department's committe for the Library.
- 2003-2012 Member of the Department's committe for the IT.
- 2005-2008 Coordinator for the Master in Finance program.

Professional Service

- 2017 Member of the Register of Expert Peer-Reviewers for Italian Scientific Evaluation (Reprise).
- 2005-2009 Organizer of the CIdE summer school for PhD students on Time Series Econometrics, Bertinoro, Italy.
 - 2014 Organizer of the IV International Conference in memory of Carlo Giannini, Pavia, Italy, joint with banca d'Italia and SIdE.

Academic Program Committee member

- 2011 XI Workshop on Quantitative Finance, Padova, Italy.
- 2014 8th International conference on Computational and Financial Econometrics, *Pisa*, Italy.
- 2015 6th Italian Congress of Econometrics and Empirical Economics, Salerno, Italy.

2017 7th Italian Congress on Empirical Economics and Econometrics, Messina, Italy.

Editorial Refereeing

o Computational Statistics and Data Analysis, Econometrics and Statistics, Empirical Economics, Energy Economics, European Journal of Finance, International Review of Economics and Finance, Mathematics and Computers in Simulation, Giornale degli economisti e Annali di Economia, Journal of Applied Econometrics, Journal of Banking and Finance, Journal of Empirical Finance, Journal of Econometrics, Journal of Forecasting, Journal of International Money and Finance, Journal of Macroeconomics, Journal of Money, Credit and Banking, Journal of Royal Statistical Society series B, Mathematical Reviews, North American Journal of Economics and Finance, Oxford Bulletin of Economics and Statistics, Quantitative Finance, RISEC Rivista Italiana degli Economisti, Statistica Sinica, Stochastic Models and Applications

Research grants

- 2006 Local coordinator PRIN (MIUR), The use of high-frequency data for the analysis of interdependencies among volatilities, volumes and financial returns.
- 2004 Local coordinator PRIN (MIUR), The term structure of interest rates and the macroeconomic variables.
- 2002 Local coordinator PRIN (MIUR), Analysis of the term structure of interest rates in the European financial integration process.

Conference and Seminar Presentations

o CIdE, Milan 1995. Quantitative researches on economic policy, organized by Bank of Italy and CIdE, Rome 1997. University of Brescia, 1997. Duke University, 1998. University College Dublin, 1999. Inference and Prediction in Financial Risk Management, Tirano 1999. Scientific Congress of the Società Italiana di Statistica, Milan, 2002. 1st Italian Congress on Empirical Economics and Econometrics, Venice, 2005. SER2006, Rome, 2006. Annual meeting of the Italian Economic Society, Verona 2006. 13th International Conference on Panel Data, Cambridge 2006. Econometric Society European Meeting, Wien 2006. 2nd Italian Congress on Empirical Economics and Econometrics, Rimini, 2007. International Workshop on Computational and Financial Econometrics, University of Geneva, 2007. MAF Venice, 2008. University of Palermo, 2008. International Workshop on Computational and Financial Econometrics Université de Neuchatel, 2008. Econometric Society European Meeting, Bocconi University, 2008. Padua University, 2008. University of Milan, 2008. Cass Business School, 2009. XI Workshop on Quantitative Finance, University of Palermo, 2010. 4th CSDA International Workshop on Computational and Financial Econometrics, London, 2010. XII Workshop on Quantitative Finance, Padua, 2011. Financial and Time Series Econometrics Workshop, Bocconi University, Milan, 2011. Econometric Society European Meeting, Oslo (Norway), 2011. 7th Conference on Statistical Computation and Complex Systems (S.Co.), Padua, 2011. 5th CSDA International Workshop on Computational and Financial Econometrics, London, 2011. CREATES, Aarhus University (DK), 2012. Cass Business School, London, 2012, Moscow School of Economics, 2012. 6th CSDA International Workshop on Computational and Financial Econometrics, Oviedo. 7th CSDA International Workshop on Computational and Financial Econometrics, London, 2013. XV Workshop on Quantitative Finance, Florence, 2014. SoFiE Workshop on "Skewness, Heavy Tails, Market Crashes, and Dynamics", Cambridge, 2014. Conference on Indirect Estimation Methods in Finance and Economics, Allensbach, Lake Constance, Germany, 2014. International Association Applied Econometrics 2015 Annual Conference - University of Macedonia, Thessaloniki, 25-27 June 2015. 9th International Workshop on Computational and Financial Econometrics, London, 2015. Colloquia MAF, Paris 2016. 10th International Workshop on Computational and Financial Econometrics, Siviglia, 2016. 7th Italian Congress on Empirical Economics and Econometrics, Messina, 2017. 11th International Workshop on Computational and Financial Econometrics, London, 2017. Frontiers in High-Frequency Financial Econometrics Scuola Normale Superiore di Pisa, 2018. 12th International Workshop on Computational and Financial Econometrics, Pisa, 2018. Econometrics in the Arena, Verona, 2019

Articles

- [1] A. Bastianin, E. Bacchiocchi, A. Missale, and **E. Rossi** Structural analysis with mixed-frequency data: A model of US capital flows. *Economic Modelling*, 89, 427-443, 2020.
- [2] C. Castagnetti, E. Rossi, and L.Trapani. A two-stage estimator for heterogeneous panel models with common factors. *Econometrics and Statistics*, 11:63–82, 2019.
- [3] **E. Rossi**, and P.Santucci de Magistris Indirect inference with time series observed with error. *Journal of Applied Econometrics*, 33:874–897, 2018.
- [4] M. Caporin, E. Rossi, and P. Santucci De Magistris. Chasing volatility: A persistent multiplicative error model with jumps. *Journal of Econometrics*, 198:122–145, 2017.
- [5] M. Caporin, E. Rossi, and P. Santucci De Magistris. Volatility jumps and their economic determinants. *Journal of Financial Econometrics*, 14:29–80, 2016. VQR 2011-2014: 1
- [6] **E. Rossi** and D. Fantazzini. Long memory and periodicity in intraday volatility. Journal of Financial Econometrics, 13:922–961, 2015. VQR 2011-2014: 1
- [7] A. Ghalanos, **E. Rossi**, and G. Urga. Independent factor autoregressive conditional density model. *Econometric Reviews*, 35:594–616, 2015.
- [8] C. Castagnetti, **E. Rossi**, and L.Trapani. Testing for no factor structures: on the use of Hausman-type statistics. *Economics Letters*, 130:66–68, 2015.
- [9] C. Castagnetti, E. Rossi, and L.Trapani. Inference on factor structures in heterogeneous panels. *Journal of Econometrics*, 184:145–157, 2015. VQR 2011-2014: 1
- [10] **E. Rossi** and P. Santucci De Magistris. Estimation of long memory in integrated variance. *Econometric Reviews*, 33:785–814, 2014.
- [11] **E. Rossi** and P. Santucci De Magistris. Long memory and tail dependence in trading volume and volatility. *Journal of Empirical Finance*, 22:94–112, 2013.
- [12] E. Rossi and P. Santucci De Magistris. A no-arbitrage fractional cointegration model for futures and spot daily ranges *Journal of Futures Markets*, Vol. 33, No. 1, 77–102, 2013.
- [13] C. Castagnetti and **E. Rossi**. Euro corporate bond risk factors. *Journal of Applied Econometrics*, 28:372–391, 2013. VQR 2011-2014: 1
- [14] **E. Rossi** and F.Spazzini. Model and distribution uncertainty in multivariate GARCH estimation: a Monte Carlo analysis. *Computational Statistics and Data Analysis*, 54:2786–2800, 2010. VQR 2004-2010: 0.8
- [15] E. Rossi. Univariate GARCH models: a survey. Quantile, 8, 2010.

- [16] S. Pastorello and **E. Rossi**. Efficient importance sampling maximum likelihood estimation of stochastic differential equations. *Computational Statistics and Data Analysis*, 54:2753–2762, 2010. VQR 2004-2010: 0.8
- [17] R. Lucchetti and **E. Rossi**. Artificial regression testing in the GARCH-in-mean model. *Econometrics Journal*, 8:306–322, 2005. VQR 2004-2010: 1
- [18] **E. Rossi** and C. Zucca. Hedging interest rates risk with multivariate garch. *Applied Financial Economics*, 12:241–251, 2002.
- [19] L. Maggi, **E. Rossi**, and C. Giannini. Stima e previsione della curva dei rendimenti italiana con i garch multivariati. *Statistica*, LXI, 2001.
- [20] **E. Rossi**. Un modello GARCH multivariato per la volatilità dei tassi di cambio. Giornale degli Economisti e Annali di Economia, LIV:415–451, 1995.

Books

- o Giannini C., Dolcino F., and **E. Rossi** (1998) "Reti neurali artificiali per l'analisi e la previsione di serie finanziarie" Collana Studi di UniCredito Italiano, n.1, 8/1998.
- o De Giuli M.E., Maggi M.A. Magnani U. and **E. Rossi** (2002) *Derivati*, Giappichelli Editore, Torino, ISBN 88-348-2468-7.

Articles in books

- o E. Rossi and C. Zucca (1999) "Premio al rischio e curva dei tassi forward impliciti: una valutazione econometrica con dati giornalieri" *Ricerche quantitative per la politica economica* Banca d'Italia, Roma.
- o S. Pastorello and **E. Rossi** (2002) "Statistical inference for diffusion processes with discrete data: a survey" (2002), PP.39-50, Società Italiana di Statistica, Atti della XLI Riunione Scientifica, CLEUP, Padua, ISBN 88-7178-589-4.
- E. Rossi and P. Santucci de Magistris (2009) "Long memory and tail dependence in trading volume and volatility" in Statistical methods for the analysis of large data-sets, Italian statistical society, pp.117-120, ISBN 978-88-6129-425-7.
- o E. Rossi and P. Santucci de Magistris (2013) "Long memory in integrated and realized variance" in N. Torelli et al. (eds.), Advances in Theoretical and Applied Statistics, Studies in Theoretical and Applied Statistics, 47, pp.523-532, Springer-Verlag, Heidelberg. ISBN 978-3-642-35588-2.
- o E. Rossi and F.Spazzini "GARCH models for commodity markets" (2015) in Andrea Roncoroni, Gianluca Fusai, Mark Cummins (Eds) *Handbook of Multi-Commodity Markets and Products: Structuring, Trading and Risk Management*. John Wiley and Sons. ISBN: 978-0-470-74524-3.

Policy papers

- o Nardo M., Ndacyayisenga N., Papanagiotou and **Rossi E.** (2016), "Measuring Financial Integration in Europe: a price-based approach for equity and bond markets", EUR 27792. Luxembourg (Luxembourg): Publications Office of the European Union, JRC100791. ISBN: 978-92-79-57269-2 ISSN: 1831-9424 DOI: 10.2788/589345
- o Alessi L., Cannas G., Di Girolamo F., Ossola E., Papanagiotou E. Petracco Giudici M., and **Rossi E.** (2016) "Estimation of potential benefits of the implementation of the fundamental review of the trading book and leverage ratio", EUR 28269. Luxembourg (Luxembourg): Publications Office of the European Union. JRC103768 ISBN: 978-92-79-64119-0 ISSN: 1831-9424 DOI: 10.2791/988150
- Nardo M., Ndacyayisenga N., Papanagiotou E., Rossi E. and Ossola E. (2017) "Measures and drivers of financial integration in Europe". Publications Office of the European Union. JRC105708 ISBN: 978-92-79-65709-2 ISSN: 1831-9424 DOI: 10.2760/92134
- Ossola E. and Rossi E. (2017) "Financial integration estimation with realized measures". EUR 28646 EN. Luxembourg (Luxembourg): Publications Office of the European Union. JRC106955. ISBN: 978-92-79-69556-8, ISSN: 1831-9424, DOI: 10.2760/64493
- Nardo M., Ossola E., Papanagiotou E., and Rossi E. (2017), "Monitoring Financial integration by using price-based indicators". Publications Office of the European Union. JRC109487 ISBN: 978-92-79-77062-3 ISSN: 1831-9424 DOI: 10.2760/915174

Submitted papers

- o Bucci A., G. Palomba and **E. Rossi** (2019) "Does macroeconomics help in predicting stock markets volatility comovements? A nonlinear approach". Working Papers 440, Universita' Politecnica delle Marche (I), Dipartimento di Scienze Economiche e Sociali.
- o Catania L., E. Rossi and P. Santucci de Magistris (2020) "Extreme Overdispersion and Persistence in Time-Series of Counts". SSRN paper

Unpublished papers

o Rossi, E. and F. Spazzini (2009) "Finite sample results of range-based integrated volatility estimation" Center for Econometric Analysis, Cass Business School, WP-CEA-4-2009.

Other publications

o "Nobel all'arte di prevedere" Il Domenicale, Il Sole 24
ore, 12/10/2003 (joint with F.Daveri).

Languages

English Effective Operational Proficiency

French Upper intermediate

CEFR: C1

CEFR: B2

Computer skills

 ${\it Matlab, Gretl, GAUSS, Eviews}$