

Eduardo Rossi

Professor of Econometrics

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Personal

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

Current position

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

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.

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2012 **Visiting Professor**, *Moscow School of Economics*, Moscow, Russia.

Professional Employment History

- 2002–present **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.

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*.

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- 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 Committee**.
- 2005-2012 **Member of the Department's committee for the Library**.
- 2003-2012 **Member of the Department's committee 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

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 Empirical Finance, Journal of Econometrics, Journal of Forecasting, Journal of International Money and Finance, Journal of Macroeconomics, 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, 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

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*, forthcoming, 2019.
- [2] **E. Rossi**, and P.Santucci de Magistris Indirect inference with time series observed with error. *Journal of Applied Econometrics*, 33:874–897, 2018.
- [3] C. Castagnetti, **E. Rossi**, and L.Trapani. A two-stage estimator for heterogeneous panel models with common factors. *Econometrics and Statistics*, forthcoming.
- [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.
- [6] **E. Rossi** and D. Fantazzini. Long memory and periodicity in intraday volatility. *Journal of Financial Econometrics*, 13:922–961, 2015.
- [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.
- [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] C. Castagnetti and **E. Rossi**. Euro corporate bond risk factors. *Journal of Applied Econometrics*, 28:372–391, 2013.
- [13] **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.
- [14] **E. Rossi**. Univariate GARCH models: a survey. *Quantile*, 8, 2010.
- [15] S. Pastorello and **E. Rossi**. Efficient importance sampling maximum likelihood estimation of stochastic differential equations. *Computational Statistics and Data Analysis*, 54:2753–2762, 2010.
- [16] R. Lucchetti and **E. Rossi**. Artificial regression testing in the GARCH-in-mean model. *Econometrics Journal*, 8:306–322, 2005.

- [17] C. Zucca and **E. Rossi**. Hedging interest rates risk with multivariate garch. *Applied Financial Economics*, 12:241–251, 2002.
- [18] L. Maggi, **E. Rossi**, and C. Giannini. Stima e previsione della curva dei rendimenti italiana con i garch multivariati. *Statistica*, LXI, 2001.
- [19] **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

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.

De Giuli M.E., Maggi M.A. Magnani U. and **E. Rossi** (2002) *Derivati*, Giapichelli Editore, Torino, ISBN 88-348-2468-7.

Articles in books

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.

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.

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.

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

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

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

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.

Catania L.,**E. Rossi** and P. Santucci de Magistris (2018) “When the going gets tough: extreme overdispersion and persistence in time series of counts”

Unpublished papers

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

“Nobel all’arte di prevedere” *Il Domenicale*, Il Sole 24ore, 12/10/2003 (joint with F.Daveri).

Languages

English	Effective Operational Proficiency	<i>CEFR: C1</i>
French	Upper intermediate	<i>CEFR: B2</i>

Computer skills

Matlab,Gretl,GAUSS,Eviews