

Valeria Bignozzi

Curriculum Vitae

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Dept. of Statistics and Quantitative Methods
University of Milano-Bicocca
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Date and place of birth: 04-05-1983, Rome

Current Position

- 03.2020-present **Associate Professor of Mathematical methods of economics, finance and actuarial sciences**, *Department of Statistics and Quantitative Methods, Milan-Bicocca.*
- 06.2023-06.2034 **National Scientific Habilitation (ASN) for the position of Full Professor**, *SECS-S/06-Mathematical methods of economics, finance and actuarial sciences.*
- 04.2017-04.2028 **National Scientific Habilitation (ASN) for the position of Associate Professor**, *SECS-S/06-Mathematical methods of economics, finance and actuarial sciences.*
- 10.2016-02.2020 **Senior researcher (rtd b)**, *Dept. Statistics and Quantitative Methods, University of Milano-Bicocca, Italy.*

Previous Positions

- 08.2016 **Winner of a junior research position (rtd a)**, *Scuola Normale Superiore of Pisa, Italy, Position not fulfilled.*
- 07.2015-06.2016 **Postdoc position (12 months)**, *Dept. of Methods and Models for Economics, Territory and Finance (MEMOTEF), Sapienza University of Rome, Italy. Supervisor: Prof. L. Petrella. Research project: Empirical and Bayesian elicitable risk measures.*
- 05.2014-04.2015 **Postdoc position (12 months)**, *School of Economics and Management, University of Florence, Italy. Supervisors: Prof. M. E. Mancino, Dr. G. Puccetti. Research project: Risk measures bounds under dependence uncertainty.*
- 01.2013-04.2014 **Postdoc position (16 months)**, *Dept. of Mathematics, ETH Zurich, Switzerland. Supervisor: Prof. P. Embrechts. Research project: Elicitable risk measures; Risk measure under dependence uncertainty.*
- 01.2012-08.2012 **Research Assistant (8 months)**, *Faculty of Actuarial Science and Insurance, Cass Business School, City University London, UK. Supervisor: Dr. A. Tsanakas. Research project: The impact of model error on capital adequacy.*

Education

- 2008-2012 **PhD**, *Faculty of Actuarial Science and Insurance, Cass Business School, City University London, UK. Thesis: Contributions to solvency risk measurement. Supervisors: Dr. A. Tsanakas, Dr. L. Ballotta, Declared equivalent ("equipollente") to the Italian title "Dottore di Ricerca" by the Italian Education, University and Research Ministry (MIUR).*
- 2005-2008 **Master Degree in Applied Mathematics**, *Dept. of Mathematics, Sapienza University of Rome, Italy. Thesis: Stochastic Integration for mixed Brownian-Poisson Processes with Application to Incomplete Markets. Supervisors: Prof. M. Isopi and Dr. E. Biffis (Imperial College, London), Grade: 110/110 cum laude.*
- 2005-2008 **Bachelor Degree in Mathematics**, *Dept. of Mathematics, Sapienza University of Rome, Italy. Thesis: Determinazione dei prezzi per i servizi di telecomunicazione (Service pricing in the telecommunication market). Supervisor: Prof. M. Isopi, Grade: 110/110 cum laude.*

Visiting Positions

- 07.2019 **Visiting Researcher**, *Faculty of Actuarial Science and Insurance, Cass Business School, City University London, UK, research project with Dr. A. Tsanakas, 2 days.*
- 03.2017 **Visiting Researcher**, *Faculty of Actuarial Science and Insurance, Cass Business School, City University London, UK, research project with Dr. A. Tsanakas, 1 week.*
- 10.2014 **Visiting Researcher**, *Dept. of Statistics and Actuarial Science, University of Waterloo, Canada, research project with Prof. R. Wang, 3 weeks.*
- 05-06.2014 **Visiting Researcher**, *Dept. of Mathematics, ETH Zurich, Switzerland, Research project with Prof. P. Embrechts, 6 weeks.*
- 08.2013 **Visiting Researcher**, *Dept. of Statistics and Quantitative Methods, University of Milano-Bicocca, research project with Prof. F. Bellini, one week.*

Attended Courses

- 02.2016 **Extremes, Copulas and Actuarial Science**, *Centre International de Rencontres Mathématiques, Marseille.*
- 11.2015 **Risk aggregation and Fréchet problems**, *Prof. R. Wang, Dependence and Risk Measures Workshop, Milan, Italy.*
- 06.2013 **Enterprise Risk Management**, *Prof. D. Ingram and Prof. S. Loisel, EPFL Lausanne, Switzerland.*
- 08.2011 **Learning, Teaching and Assessment**, *City University London, UK.*
- 08.2010 **3rd SMAI European Summer School in Financial Mathematics**, *Paris, France.*
- 08.2010 **Financial Modeling with Levy Processes**, *Prof. R. Cont, 6th Conference in Actuarial Science and Finance in Samos, Greece.*

Talks as Invited Speaker

- 12.2022 **“One World Actuarial Research Seminar”**, Online Seminar, *Inter-order relations between moments of a Student t distribution, with an application to L_p -quantiles.*
- 06.2022 **“Center of Research in Econo-finance and Actuarial sciences on Risk”**, ESSEC Business School, Paris, France, *Insurance valuation: A two-step generalised regression approach.*
- 05.2017 **“Recent Developments in Dependence Modeling with Applications in Finance and Insurance”**, Aegina, Greece, *On elicitable risk measures and dynamic expectiles.*
- 09.2016 **“Salzburg workshop on Dependence Models and Copulas”**, Salzburg, *Diversification limit of VaR under dependence uncertainty.*
- 07.2016 **“Workshop on Recent Advances in Quantile and M-Quantile Regression”**, Pisa, *On L_p -quantiles.*
- 04.2016 **“Scientific day of the DGVFM”** Bremen, Germany, *On elicitable risk measures and backtesting.*
- 04.2016 **Dept. seminar series, University of Verona**, *On elicitable risk measures.*
- 03.2016 **“Workshop on Applied Statistics”** Technische Universität Dresden, Germany, *Diversification limit of VaR under dependence uncertainty.*
- 03.2016 **Dept. of Mathematics, Imperial College London, UK**, *“Diversification limit of VaR under dependence uncertainty”.*
- 10.2015 **Workshop: “Risk Measures: Frontiers of Mathematics and Regulation”** University of Bologna, *“Diversification limit of VaR under dependence uncertainty”.*
- 07.2015 **Politecnico of Milano**, *“Risk measurement under dependence uncertainty”.*
- 04.2015 **Dept. of Statistics and Quantitative Methods, University of Milano-Bicocca**, *“Reducing model risk with positive and negative dependence assumptions”.*
- 04.2015 **Prometeia seminar, Bologna**, *“How superadditive can a risk measure be?”.*
- 04.2015 **Workshop “Copulae: On the crossroads of Mathematics and Economics”** Oberwolfach, *“Open problems in risk aggregation under dependence uncertainty”.*
- 12.2014 **ETH Risk Center, Zurich**, *“How superadditive can a risk measure be?”.*
- 11.2014 **Dept. of Economics and Finance, Luiss Guido Carli, Rome**, *“How superadditive can a risk measure be?”.*
- 10.2014 **Dept. of Statistics and Actuarial Science, University of Waterloo, Canada**, *“Reducing model risk with positive and negative dependence assumptions”.*
- 10.2014 **Dept. of Statistics and Actuarial Science, University of Waterloo, Canada**, *“On elicitable risk measures”.*

- 05.2014 **Dept. of Mathematical Stochastics, University of Freiburg**, “*How superadditive can a risk measure be?*”.
- 05.2014 **Institute of Mathematical Stochastics, Leibniz University of Hannover**, “*How superadditive can a risk measure be?*”.
- 01.2014 **Workshop: “New trends in risk measures” Dept. of Statistics and Quantitative Methods, University of Milano-Bicocca**, “*How superadditive can a risk measure be?*”.
- 11.2013 **Faculty of Actuarial Science and Insurance, Cass Business School, City University London**, “*Elicitable risk measures*”.
- 11.2013 **Institute of Mathematical Statistics and Actuarial Science, University of Bern**, “*Dynamic risk measurement and expectiles*”.
- 08.2013 **Dept. of Statistics and Quantitative Methods, University of Milano-Bicocca**, “*Dynamic risk measurement and expectiles*”.
- 05.2013 **Dept. of Mathematics, ETH Zurich**, “*Dynamic risk measurement and expectiles*”.
- 05.2012 **Dept. of Mathematics, ETH Zurich**, “*Quantifying and controlling the impact of model uncertainty on risk measurement*”.

Contributed Talks at International Conferences

- 09.2023 **AMASES XXLVII, Milan, Italy**, “Fair Valuation under parameter uncertainty”.
- 06.2023 **Informa APS-23, Nancy, France**, “Fair Valuation under parameter uncertainty”.
- 09.2022 **AMASES XXLVI, Palermo, Italy**, “On the L_p -quantiles and the Student t distribution”.
- 03.2022 **XXIII Quantitative Finance Workshop, Rome, Italy**, “Insurance valuation: A two-step generalised regression approach”.
- 07.2021 **24th International Congress on Insurance: Mathematics and Economics, online**, “Insurance valuation: A two-step generalised regression approach”.
- 06.2019 **9th General AMaMeF Conference, Paris**, “Risk measures based on benchmark loss distributions”.
- 06.2016 **48th Scientific Meeting of the Italian Statistical Society, University Salerno**, “On the L_p -quantiles and the Student t distribution”.
- 12.2015 **8th International Conference of the ERCIM WG on Computational and Methodological Statistics, University of London, UK**, “Bayesian Inference for generalised quantiles”.
- 11.2015 **Dependence and Risk Measures, University of Milano-Bicocca, Italy**, “On dynamic expectiles”, (Poster presentation).
- 01.2015 **XVI Workshop on Quantitative Finance, University of Parma**, “Reducing model risk with positive and negative dependence assumptions”.

- 09.2014 **5th International Conference Mathematics in Finance, Skukuza, Kruger National Park South Africa**, “*How superadditive can a risk measure be?*”.
- 04.2014 **Imperial-ETH Zurich Workshop on Mathematical Finance, ETH Zurich**, “*How superadditive can a risk measure be?*”.
- 04.2014 **6th Mathematical and Statistical Methods for Actuarial Science and Finance, University of Salerno, Vietri sul Mare**, “*Elicitable risk measures*”.
- 01.2014 **XV Workshop on Quantitative Finance, University of Florence**, “*Elicitable risk measures*”.
- 07.2013 **The 17th International congress on Insurance: Mathematics and Economics, Copenhagen**, “*Risk measurement and model uncertainty: a simulation study*”.
- 01.2013 **Perspectives on Actuarial Risks in Talks of Young Researchers, Ascona**, “*Quantification and control of residual estimation risk*”.
- 04.2012 **5th Mathematical and Statistical Methods for Actuarial Science and Finance, Ca’Foscari University of Venice**, “*Quantifying and controlling the impact of probability distribution estimation on risk measurement*”.
- 06.2011 **The 15th International congress on Insurance: Mathematics and Economics, Trieste**.
- 06.2010 **6th Conference in Actuarial Science & Finance on Samos, University of the Aegean**, “*Sequentially consistent risk measures*”.

Research Interests

- Risk Measures.
- Quantitative Risk Management.
- Modeling with Copulae.
- Dependence Modeling.
- Models for risk aggregation and diversification.
- Quantiles and generalised quantiles.

Teaching and Thesis supervision

- 2018-present **Lecturer**, *Actuarial Mathematics*, DISMEQ Department, University of Milano-Bicocca, Master level.
- 2016-present **Lecturer**, *Mathematics 1*, DISMEQ Department, University of Milano-Bicocca, for bachelor students.
- May 2023 **Lecturer**, *An introduction to risk measures*, MEMOTEF Department, Sapienza University of Rome, 8 hours course for PhD students.
- May 2021 **Lecturer**, *An introduction to risk measures*, MEMOTEF Department, Sapienza University of Rome, 8 hours course for PhD students.

- 2016-17 **Teaching Assistant**, *Actuarial Mathematics*, DISMEQ Department, University of Milano-Bicocca, Master level.
- 2016-17 **Teaching Assistant**, *Mathematical Finance*, LUISS Guido Carli, for bachelor students.
- 2015-16 **Lecturer**, *Introduction to risk measures*, MEMOTEF Department, Sapienza University of Rome, for PhD students.
- 2015-16 **Teaching Assistant**, *Time series analysis*, University of Rome, Italy, Master level.
- 2014-15 **Teaching Assistant**, *Quantitative Finance and Derivatives*, University of Florence, Italy, Undergraduate and Master level.
- 2013-14 **Lecturer**, *Risk measures*, Dept. of Mathematics, ETH Zurich, Undergraduate and Master level.
- 2010-11 **Teaching Assistant**, *Statistics and Probability II*, Cass Business School, City University London, UK, Undergraduate level.
- 2009-10 **Teaching Assistant**, *Statistics and Probability II*, Cass Business School, City University London, UK, Undergraduate level.
- 2008-09 **Teaching Assistant**, *Statistics and Probability II*, Cass Business School, City University London, UK, Undergraduate level.

Other Activities

- 2020-present **Member of the PhD Program “Modelli per l’Economia e la Finanza”**, *MEMOTEF Department, University of Rome*.
- 2023 **Member of the organising committee for the conference AMASES XLVII**, *Department of Statistics and Quantitative Methods, University of Milan-Bicocca Italy*.
- 2017-present **Member of the AMASES (Associazione per la matematica applicata alle scienze economiche e sociali)**.
- 2016-present **Member of the GNAMPA (Gruppo Nazionale per la Analisi Matematica, la Probabilità e le loro Applicazioni)**.
 - 2016 **Member of the SIS (Società Italiana Statistica)**.
 - 2014 **Member of the organising committee for the conference Dependence in Risk Management and Risk Measurement**, *School of Economics and Management, University of Florence, Italy*.
- 2013-2014 **Organizer of the RiskLab PhD seminars**, *RiskLab, Dept. of Mathematics, ETH Zurich*.
- 2012-2014 **PhD Representative in the Research Committee**, *Cass Business School, City University London, UK*.

Grants, Scholarships and Awards

- 2020 **Indam-GNAMPA 2020 fundings for the project "Capital allocation per premi di Orlicz e misure di rischio di Haezendonck-Goovaerts" with Prof. Rosazza-Gianin (P.I.), Prof. Francesca Centrone and PhD Gabriele Canna, Eur 1575.**
- 2019 **FAQC fundings for researchers (University of Milano-Bicocca) with Prof. Bellini, Prof. Rosazza-Gianin, PhD A. M. Fiori, Eur 15000.**
- 2017 **FFABR fundings for researchers, Eur 3000.**
- 2016 **GNAMPA fundings to participate at the 40th AMASES Meeting, Eur 200.**
- 2012 **Dimitris N. Chorafas foundation award for the PhD Thesis, US \$4000.**
- 2011 **Research funding, The impact of model error on capital adequacy, sponsored by the Institute of Actuaries (Primary investigator Dr A. Tsanakas), \$8000.**
- 2010 **Award for best contribution to the conference, 6th Conference in Actuarial Science and Finance in Samos, Greece.**
- 2008 **Cass Business School Doctoral Bursary, City University London, UK.**
- 2006 **Erasmus scholarship, Dept. of Mathematics, Royal Holloway University, London, UK.**

Journal services

- Referee for **Quantitative Finance, Astin Bulletin; Journal of Mathematical Analysis and Applications; Stochastics and Risk Modeling; Insurance: Mathematics and Economics; The European Journal of Finance; Scandinavian Actuarial Journal; Mathematics and Financial Economics; Operations Research Letters, Mathematical Finance, Risks, Methodology and Computing in Applied Probability, European Journal of Operational Research, Dependence Modeling.**
- 06.14-08.15 **Assistant Editor for Dependence Modeling (<http://www.degruyter.com/view/j/demo>), Editor: G. Puccetti; Associate Editors: F. Durante, M. Scherer, S. Vanduffel.**

Publications

1. K. Barigou, V. Bignozzi and A. Tsanakas. *Insurance valuation: a two-step generalised regression approach*. *Astin Bulletin*, 52, 211–245, 2022.
2. V. Bignozzi, C. Macci and L. Petrella. *Large deviations for method-of-quantiles estimators of one-dimensional parameters*. **Comm. Statist. Theory Methods**, 49, 1132-1157, 2020.
3. V. Bignozzi, M. Burzoni and C. Munari. *Risk measures based on benchmark loss distributions*. **Journal of Risk and Insurance**, 87, 437–475, 2020.
4. F. Bellini, V. Bignozzi and G. Puccetti. *Conditional expectiles, time consistency and mixture convexity properties*. **Insurance Math. Econ.**, 82, 117–123, 2018.
5. V. Bignozzi, C. Macci and L. Petrella. *Large deviations for risk measures in finite mixture models*. **Insurance Math. Econ.** 80, 84-90, 2018.
6. A. V. Asimit, V. Bignozzi, K. C. Cheung, J. Hu and E-S. Kim. *Robust and Pareto optimality of insurance contracts*. **European J. Oper. Res.**, 262(2), 720-732, 2017. Impact Factor

2.595.

7. M. Bernardi, V. Bignozzi and L. Petrella. *On the L_p -quantiles for the Student t distribution.* **Statist. Probab. Lett.**, 128, 77-83, 2017. Impact Factor 0.6.
8. V. Bignozzi, A. Tsanakas. *Parameter uncertainty and residual estimation risk.* **Journal of Risk and Insurance**, 83(4), 949-978, 2016. Impact Factor 1.41.
9. V. Bignozzi. *On the L_p -quantiles and the Student t distribution.* **Peer-reviewed proceedings of the 48th Scientific Meeting of the Italian Statistical Society.** ISBN: 9788861970618, 2016.
10. V. Bignozzi, T. Mao, B. Wang and R. Wang. *Diversification limit of quantiles under dependence uncertainty.* **Extremes** 19(2), 143–170, 2016. Impact Factor 1.33
11. V. Bignozzi and A. Tsanakas. *Model uncertainty in risk capital measurement.* **The Journal of Risk** 18(3), 1-24, 2016. Impact Factor 0.34 .
12. F. Delbaen, F. Bellini, V. Bignozzi and J. Ziegel. *Risk Measures with CxLS.* **Finance Stoch.** 20(2), 433–453, 2016. Impact Factor 1.44.
13. V. Bignozzi, G. Puccetti and L. Rüschendorf. *Reducing model risk using positive and negative dependence assumptions.* **Insurance Math. Econ.** 61(1), 17-26, 2015. Impact Factor 1.13.
14. R. Wang, V. Bignozzi and A. Tsanakas. *How superadditive can a risk measure be?* **SIAM J. Finan. Math.** 6(1), 776-803, 2015. Impact Factor 1.01.
15. F. Bellini and V. Bignozzi. *On Elicitable Risk Measures.* **Quant. Finance** 15(5), 725-733, 2015. Impact Factor 0.65.
16. V. Bignozzi and G. Puccetti. *Studying mixability with supermodular aggregating functions.* **Statist. Probab. Lett.** 100, 48-55, 2015. Impact Factor 0.6.
17. V. Bignozzi. *Open problems in risk aggregation under dependence modelling.* **Oberwolfach Report (OBW) No. 20/2015**, DOI: 10.4171/OWR/2015/20 book series (ISSN 1660-8933).

“Le dichiarazioni rese nel presente curriculum sono da ritenersi rilasciate ai sensi degli artt. 46 e 47 del D.P.R. 445/2000”