Marco PATACCA

PERSONAL DATA

PLACE AND DATE OF BIRTH:	Todi, Italy | 05 January 1990
EMAIL:	marco.patacca@unipg.it
LinkedIn:	linkedin.com/in/marcopatacca

CURRENT POSITION

JUL 2023 - *Present* **Assistant Professor (RTDb)**
University of Perugia, Department of Economics, Perugia, Italy

PREVIOUS POSITIONS

OCT 2022 - *Jul 2023* **Assistant Professor (RTDb)**
University of Rome Tor Vergata, Department of Economics and Finance, Rome, Italy

MAR 2020 - *Oct 2022* **Assistant Professor (RTDa)**
University of Verona, Department of Economics, Verona, Italy

JAN 2020 - *Feb 2020* **Official**
Ministry of Economy and Finance, Department of Finance, Rome, Italy

NOV 2018 - *Dec 2019* **Post-Doctoral Researcher**
Léonard de Vinci Pôle Universitaire, Research Center, Paris, France

EDUCATION

A.Y. 2017 - 2018 **Ph.D. in ECONOMICS: Quantitative Methods for Economics**
(S.S.D. SECS-S/06 - XXXI Cycle)
Department of Economics, University of Perugia, Perugia, Italy
Thesis: *Essays on Bitcoin Price Dynamics*
Supervisor: Prof. Gianna FIGÀ TALAMANCA

A.Y. 2014 - 2015 **Master's Degree in FINANCE AND QUANTITATIVE METHODS FOR ECONOMICS**
110/110 magna cum Laude
Department of Economics, University of Perugia, Perugia, Italy
Thesis: *The Extreme Value Theory in the Modelling of Catastrophic Risks*
Supervisor: Prof. Mauro PAGLIACCI

A.Y. 2011 - 2012 **Bachelor's Degree in ECONOMICS OF MARKETS AND FINANCIAL INTERMEDIARIES**
grade 107/110
Department of Economics, University of Perugia, Perugia, Italy
Thesis: *The Cornish-Fisher Expansion in the Analysis of Financial Portfolio's Performance* \| Supervisor: Prof. Gianna FIGÀ TALAMANCA

INTERNATIONAL EXPERIENCES

NOV 2017 - DEC 2017 **Visiting Scholar** - Department of Finance and Risk Engineering, *New York University, New York, USA*

JAN 2017 - MAR 2017 **Visiting Scholar** - Department of Statistics, *The London School of Economics and Political Science, London, UK*

ADDITIONAL TRAINING

Aug 2016	**ARPM Bootcamp, Advanced Risk and Portfolio Management**	
	New York University, New York, USA	
Jul 2013	**EF Cambridge English Level Test**	
	EF International Language Centers, Dublin, Ireland	
A.Y. 2010 - 2011	**Degree in Saxophone**	
	Academy of Music of Perugia, Perugia, Italy	

RESEARCH INTERESTS

Mathematical Finance, Financial Econometrics, FinTech, Machine Learning, Sentiment Analysis, Blockchain Technology, Cryptocurrencies.

PUBLICATIONS

- Cretarola, Alessandra, Figà-Talamanca, Gianna, Patacca, Marco (2023). "Sentiment-driven mean reversion in the 4/2 stochastic volatility model with jumps". APPLIED STOCHASTIC MODELS IN BUSINESS AND INDUSTRY, John Wiley & Sons Ltd. ISSN: 1526-4025. doi: 10.1002/asmb.2763. URL https://doi.org/10.1002/asmb.2763

- Figà-Talamanca, Gianna, Focardi, Sergio, Mazza, Davide, Patacca, Marco (2023). "Cryptocurrencies as a Driver of Innovation for the Monetary System". In Chou, D., O'Sullivan, C., Papavassiliou, V. (eds). FINTECH RESEARCH AND APPLICATIONS, World Scientific, pp. 143-176. ISBN: 978-1-80061-271-6. doi: 10.1142/9781800612723_0003. URL https://doi.org/10.1142/9781800612723_0003.

- Figà-Talamanca, Gianna, Patacca, Marco (2022). "An explorative analysis of sentiment impact on S&P 500 components returns, volatility and downside risk". ANNALS OF OPERATIONS RESEARCH, Springer. ISSN 1572-9338. doi: 10.1007/s10479-022-05129-w. URL https://doi.org/10.1007/s10479-022-05129-w.

- Di Persio, Luca, Lavagnoli, Emanuele, Patacca, Marco (2022). "Calibrating FBSDEs Driven Models in Finance via NNs". RISKS, vol. 10, no. 12:227, MDPI. ISSN 2227-9091. doi: 10.3390/risks10120227. URL https://www.mdpi.com/2227-9091/10/12/227.

- Figà-Talamanca, Gianna, Focardi, Sergio, Patacca, Marco (2021). "Regime switches and commonalities of the cryptocurrencies asset class". THE NORTH AMERICAN JOURNAL OF ECONOMICS AND FINANCE, vol. 57, p. 101425-101439, Elsevier. ISSN 1062-9408. doi: 10.1016/j.najef.2021.101425. URL https://doi.org/10.1016/j.najef.2021.101425.

- Figà-Talamanca, Gianna, Focardi, Sergio, Patacca, Marco (2021). "Common dynamic factors for cryptocurrencies and multiple pair-trading statistical arbitrages". DECISIONS IN ECONOMICS AND FINANCE, Springer International Publishing. ISSN 1593-8883. doi: 10.1007/s10203-021-00318-x. URL https://doi.org/10.1007/s10203-021-00318-x.

- Patacca, Marco, Focardi, Sergio (2021). "The Quantitative Easing Bursts Bitcoin Price". ACCOUNTING AND FINANCE RESEARCH, vol. 10, n. 3, p. 65-71, Sciedu Press. ISSN 1927-5986. doi: 10.5430/afr.v10n3p65. URL https://doi.org/10.5430/afr.v10n3p65.

- Cretarola, Alessandra, Figà-Talamanca, Gianna, Patacca, Marco (2020). "Market attention and Bitcoin price modeling: theory, estimation and option pricing". DECISIONS IN ECONOMICS AND FINANCE, vol. 43, p. 187-228, Springer International Publishing. ISSN: 1593-8883. doi: 10.1007/s10203-019-00262-x. URL https://doi.org/10.1007/s10203-019-00262-x

- Figà-Talamanca, Gianna, Patacca, Marco (2020). "Disentangling the relationship between Bitcoin and market attention measures". ECONOMIA E POLITICA INDUSTRIALE, vol. 47, p. 71-91, Springer International Publishing. ISSN: 0391-2078. doi: 10.1007/s40812-019-00133-x. URL https://doi.org/10.1007/s40812-019-00133-x.

- Figá-Talamanca, Gianna, Patacca, Marco (2019). "Does Market Attention Affect Bitcoin Returns and Volatility?" DECISIONS IN ECONOMICS AND FINANCE, vol. 42, p. 135-155, Springer International Publishing. ISSN: 1593-8883. doi: 10.1007/s10203-019-00258-7.

URL https://doi.org/10.1007/s10203-019-00258-7.

- Bistarelli, Stefano, Cretarola, Alessandra, Figà-Talamanca, Gianna, Patacca, Marco (2019). "Model-based arbitrage in multi-exchange models for Bitcoin price dynamics". DIGITAL FINANCE, vol. 1, p. 23-46, Springer International Publishing. ISSN: 2524-6984. doi: 10.1007/s42521-019-00001-2. URL https://doi.org/10.1007/s42521-019-00001-2.

- Bistarelli, Stefano, Cretarola, Alessandra, Figà-Talamanca, Gianna, Mercanti, Ivan, Patacca, Marco (2019). "Is Arbitrage Possible in the Bitcoin Market? (Work-In-Progress Paper)". In: Coppola M., Carlini E., D'Agostino D., Altmann J., Bañares J. (eds) Economics of Grids, Clouds, Systems, and Services. GECON 2018. LECTURE NOTES IN ARTIFICIAL INTELLIGENCE, vol 11113, pp. 243-251. Springer, Cham. ISBN: 978-3-030-13341-2, ISSN: 0302-9743. doi: 10.1007/978-3-030-13342-9_21. URL https://doi.org/10.1007/978-3-030-13342-9_21.

- Cretarola, Alessandra, Figà-Talamanca, Gianna, Patacca, Marco (2018). "A Continuous Time Model for Bitcoin Price Dynamics". In: Corazza, M., Durbán, M., Grané, A., Perna, C., Sibillo, M. (eds). Mathematical and Statistical Methods for Actuarial Sciences and Finance. MAF 2018. Springer International Publishing AG, part of Springer Nature 2018, pp. 273-277. ISBN 978-3-319-89823-0. doi: 10.1007/978-3-319-89824-7_49. URL https://doi.org/10.1007/978-3-319-89824-7_49.

CONFERENCES, SEMINARS AND WORKSHOPS

- April 20-22, 2023. **XXIV Workshop on Quantitative Finance (QFW 2023)**, University of Cassino, Gaeta, Italy. Oral presentation, "Sentiment-driven mean reversion in the 4/2 stochastic volatility model with jumps".

- December 14, 2022. **Le sfide della finanza decentralizzata**, University of Perugia, Perugia, Italy. Oral presentation, "Blockchain e cripto-assets".

- October 27-28, 2022. **International Fintech Research Conference Finance, technology, methodologies**, Politecnico di Milano, Milano, Italy. Oral presentation, "Cryptocurrencies connections in financial markets".

- September 22-24, 2022. 46th **Annual Meeting of the AMASES "Association for Mathematics Applied to Social and Economic Sciences"**, University of Palermo, Palermo, Italy. Oral presentation, "Cryptocurrencies connections in financial markets".

- May 25-27, 2022. **9th International Conference on Risk Analysis (ICRA9)**, University of Perugia, Perugia, Italy. Oral presentation, "Investor sentiment as driver of financial stock market".

- April 28-30, 2022. **Financial Regulation & Technology: Advances since the Financial Crisis (65th Meeting EWG/CFM)**, HOFSTRA University, New York, United States. Oral presentation, "An explorative analysis of sentiment impact on S&P 500 components returns, volatility and downside risk".

- March 31-April 01, 2022. **XXIII Workshop on Quantitative Finance (QFW 2022)**, University of Rome Tor Vergata, Rome, Italy. Oral presentation, "An explorative analysis of sentiment impact on S&P 500 components returns, volatility and downside risk".

- November 04-05, 2021. **3rd Crypto Asset Lab Conference (CAL2021)**, University of Milano-Bicocca, Milano, Italy. Oral presentation, "Common dynamic factors for cryptocurrencies and multiple pair-trading statistical arbitrages".

- June 22-25, 2021. **10th General AMaMeF Conference**, University of Padova (Virtual Conference), Padova, Italy. Oral presentation, "Regime switches and commonalities of the cryptocurrencies asset class".

- January 28-29, 2021. **XXII Workshop On Quantitative Finance (QFW 2021)**, University of Verona (Virtual Conference), Verona, Italy. Member of the organizing committee.

- December 19-21, 2020. **14th International Conference on Computational and Financial Econometrics (CFE-CMStatistics 2020)**, King's College London (Virtual Conference), London, United Kingdom. Oral presentation, "Common dynamic factors for cryptocurrencies and multiple pair-trading statistical arbitrages".

- September 09-11, 2019. 43$^{\text{rd}}$ **Annual Meeting of the AMASES "Association for Mathematics Applied to Social and Economic Sciences"**, University of Perugia, Perugia, Italy. Oral presentation, "Cointegration analysis of cryptocurrencies".

- June 23-26, 2019. **30th European Conference on Operational Research (EURO 2019)**, University College Dublin, Dublin, Ireland. Oral presentation, "Cointegration analysis of cryptocurrencies".

- June 15-16, 2019. **Cryptocurrency Research Conference 2019**, Southampton Business School, Southampton, United Kingdom. Oral presentation, "Regime switching analysis of cryptocurrencies".

- November 22, 2018. **Université Paris Diderot**, Paris, France. Cryptofinance seminar, "Bitcoin prices and market attention ".

- September 13-15, 2018. 42$^{\text{nd}}$ **Annual Meeting of the AMASES "Association for Mathematics Applied to Social and Economic Sciences"**, University of Naples Parthenope, Napoli, Italy. Oral presentation, "A Sentiment-Based Model for the Bitcoin: Theory, Estimation and Option Pricing".

- July 08-11, 2018. **29th European Conference on Operational Research (EURO 2018)**, Valencia, Spain. Oral presentation, "Does market attention affect Bitcoin returns and volatility?".

- May 11, 2018. **Department of Statistics and Quantitative Methods, Milano Bicocca University**, Milano, Italy. Doctoral seminar, "Bitcoin prices and market attention ".

- January 24-26, 2018. **XIX Workshop on Quantitative Finance 2018**, University of Roma Tre, Roma, Italy. Poster presentation, "Does market attention affect Bitcoin returns and volatility?".

- January 25-27, 2017. **XVIII Workshop on Quantitative Finance 2017**, University of Milano-Bicocca, Milano, Italy. Poster presentation, "Bitcoins prices and market sentiment indicators".

Research Projects

- Member of the research project **Analisi d'impatto degli investimenti socialmente responsabili sul rischio sistemico**. Grant No. 2017.0226.021, co-funded by "Fondazione Cassa di Risparmio di Perugia" and "Department of Economics of the University of Perugia".

- Member of the research project **Le sfide socio-economiche e di regolamentazione nel settore FinTech, all'incrocio tra tecnologia e finanza**. Grant No. 2018.0427.021, co-funded by "Fondazione Cassa di Risparmio di Perugia" and "Department of Economics of the University of Perugia".

- Member of the research project **Moneytrack**, Grant No. "24ème Appel à Projets du Fonds Unique Interministériel (FUI)", co-funded by "Banque publique d'investissement française Bpifrance" and "École supérieure d'ingénieurs Léonard-de-Vinci".

Editor Activity

Guest Editor for the Special Issue in **New Approaches in Economics and Finance** for the Journal *Risks*, MDPI, ISSN 2227-9091. https://www.mdpi.com/journal/risks/special_issues/76F1FM65B1

Refereeing Activity

Journal of Financial Econometrics, Information Sciences, Annals of Operations Research, Decisions in Economics and Finance, European Journal of Finance, Applied Economics, International Review of Economics and Finance, Risks, Digital Finance.

Scientific Associations Membership

- AMASES (Association for Mathematics Applied to Economic and Social Sciences)

- Fintech Research Network

Awards

AMASES 2018 Best Paper Award, The paper "A Sentiment-Based Model for the Bitcoin: Theory, Estimation and Option Pricing" has been ranked among the 4 finalist paper for the AMASES 2018 Best Paper Award.

Teaching Experiences

A.Y. 2022 - 2023	**Lecturer** of Optimization in economics and finance (Ph.D. course) *University of Perugia, Perugia, Italy*
A.Y. 2022 - 2023	**Lecturer** of Mathematical Finance (Bachelor course) *University of Rome Tor Vergata, Rome, Italy*
A.Y. 2022 - 2023	**Lecturer** of Computational Methods for Finance (Master course) *University of Verona, Verona, Italy*
A.Y. 2021 - 2022	**Lecturer** of Computational Methods for Finance (Master course) *University of Verona, Verona, Italy*
A.Y. 2020 - 2021	**Lecturer** of Computational Methods for Finance (Master course) *University of Verona, Verona, Italy*
A.Y. 2020 - 2021	**Lecturer** of Mathematical Finance (Bachelor course) *University of Verona, Verona, Italy*
A.Y. 2018 - 2019	**Lecturer** of Econometrics (Master course) *Ecole Supérieure d'Ingénieurs Léonard de Vinci, Paris, France*
A.Y. 2018 - 2019	**Teaching Assistant** of Basic Calculus (Bachelor course) *University of Perugia, Perugia, Italy*
A.Y. 2017 - 2018	**Teaching Assistant** of Basic Calculus (Bachelor course) *University of Perugia, Perugia, Italy*
A.Y. 2016 - 2017	**Teaching Assistant** of Basic Calculus (Bachelor course) *University of Perugia, Perugia, Italy*
A.Y. 2015 - 2016	**Teaching Assistant** of Basic Calculus (Bachelor course) *University of Perugia, Perugia, Italy*
A.Y. 2014 - 2015	**Teaching Assistant** of Financial Mathematics (Bachelor course) *University of Perugia, Perugia, Italy*

Languages

Italian:	Mother tongue
English:	C1

Computer Skills

Software:	Matlab, Mathematica, R, Python, SAS, LaTeX
Office and Others:	Word, Excel, PowerPoint, Windows

July 2023