Marco Francischello

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Employment

Scuola Normale Superiore
Research Associate *2023–present*
- Pursue research on the application of score-driven time series models to forecast the structural dynamics of graphs, with a specific application in predicting future states of banking networks derived from loan data

European Central Bank, Directorate General Macroprudential Policy and Financial Stability
Consultant *2022*
- Developed a Python library for pricing interest rate and credit derivatives, aiming to evaluate their influence on systemic risk across the EU banking network
- Managed large-scale data analysis using the EMIR dataset, using PySpark for efficient real-time processing in a distributed computing environment

Imperial College Business School, Department of Finance
Research Associate *2019–2022*
- Secured and led a grant-funded project as Principal Investigator, focusing on the economic trade-offs of various retirement schemes, aimed at optimizing outcomes in terms of sustainability and inequality
- Investigated advanced topics in asset pricing and public economics, producing several working papers

Education

Imperial College London **Supervisor: Prof. Damiano Brigo**
Ph.D. in Mathematical Finance *2019*
- Specialized in derivatives pricing, focusing on the implementation and analysis of Valuation Adjustments (XVA) to account for credit, liquidity, and funding risks
- Conducted a research visit at Columbia University Business School, focusing on systemic risk analysis. Reference: Prof. Paul Glasserman
- Authored multiple research papers published in peer-reviewed journals and presented the research findings at various academic and industry-focused conferences

Politecnico di Milano
Executive Course in Quantitative Finance *2014*

Università di Pisa
M.Sc. in Mathematics *2014*

Università di Pisa
B.Sc. in Mathematics *2011*

Programming Languages and Statistical Software

Python: Simulation, data analysis (pandas), big data (pyspark), machine learning (scikit-learn), deep learning (pytorch, jax), partial and ordinary differential equations