Luca Mingarelli, PhD

Economist, European Central Bank
DG Market Operations
Frankfurt am Main, 60314

luca.mingarelli@ecb.europa.eu
Phone: +49 (0)1757398118
My website and professional page

Research interests	–Empirical banking, market functioning, and monetary policy transmission – Interconnectedness and systemic risk transmission

Policy Experience

Produced internal notes and reports for DGMF and DGM senior management, ECB Board, ESRB General Board, SRB General Board. Regular analytical input and drafting for ECB Financial Stability Review and other ECB-internal outlets. Experience in leading and managing small teams.

Employment

European Central Bank: Economist / Financial Market Expert, 2023-Present
European Central Bank: Financial Stability Expert, 2019-2023
Imperial College London: Research Fellow, 2018

Consultancy

CVING, JinnCapital, Outsmart Insight, BAE Systems, ABACE Group (2014-2022).

Education

Imperial College London
Ph.D., Mathematics, 2014-2018.
MRes, Mathematical Sciences, 2013-2014.
King's College London
MSc, Theoretical Physics, 2012-2013 .
Universitá di Bologna
BSc, Physics, 2009-2012 (*cum laude).*

Teaching

DG-MF, European Central Bank
(2019-2023) Taught courses on micro-structural and network models of financial contagion, python, git, big data, and high-performance computing.
Department of Mathematics, Imperial College London
(2014-2018) Graduate teaching assistant in: Probability and Statistics, Statistical Modelling, Time Series, Analysis, Mathematical Methods I and II, Differential Equations, Mechanics, Python, Matlab, Maple, Computing in C++, Mathematics and Physics courses for the Chemistry, Physics, and Aerospace departments.

Technical Skills

Data Science, Econometrics, Big Data, Python, R, C++, UNIX, Matlab, Mathematica, Maple, Git, SQL, PySpark, Hadoop

Software dev.

bindata, ecbdata, haver, CryptPandas, PyOracleClient, mtalg, Connectors (ECB internal), ecbtools (ECB internal), epic (ECB internal)

Big Data Experience

Experience with the following datasets: AnaCredit, SHS-(S/G/E), EMIR, MOPDB, MMSR, SFTDS, COREP/FINREP, RIAD, ROSSI, GLEIF, CSDB, Bloomberg, Trade data, iBACH, Orbis, Moody's Credit Edge, Urgentem, Moody's 427, ISS, Bloomberg, Haver, Dealogic

Current Research and Working Papers

Financial contagion and resolution strategies, with P. Bochmann, L. Kuitunen, J. Metzler, M. Montagna, and M. Spaeth;

Repo netting and clearing in the Euro Area, with C. Giglio and J. Moore (*forthcoming*)

Correlated default events and systemic risk, with A. Grassi and M. Sydow(*forthcoming*)

Dawn of the (Half) Dead: The Twisted World of Zombie Identification, with B. Ravanetti, T. Shakir, and J. Wendelborn;*ECB Working Paper Series, No 2743*, 2022

Contagion from market price impact: a price-at-risk perspective, with G. Fukker, M. Kaijser, and M. Sydow; *ECB Working Paper Series, No 2692*, 2022

Euro Area banks' sensitivity to changes in carbon price, with M. Belloni, and F. Kuik; *ECB Working Paper Series, No 2654*, 2022

Policy Publications

Euro area banks as intermediators of US dollar liquidity via repo and FX swap markets, with B. Klaus, *ECB Financial Stability Review*, November 2024;

Key linkages between banks and non-bank financial institutions, with E. Franceschi, M. Grodzicki, B. Kagerer, C. Kaufmann, F. Lenoci, C. Pancaro, and R. Senner, *ECB Financial Stability Review*, 2023;

Towards macroprudential frameworks for managing climate risk, with ECB/ESRB Project Team on climate risk monitoring, *ECB and ESRB Report*, 2023;

The macroprudential challenge of climate change, with ECB/ESRB Project Team on climate risk monitoring, *ECB and ESRB Report*, 2022;

Price-at-risk: systemic risk from price-impact induced contagion, with G. Fukker, M. Kaijser, and M. Sydow; *SUERF Policy Brief, No 466*, 2022

Can banks weather the green transition? The financial risks of increasingly stringent climate policies, with M. Belloni and F. Kuik; *SUERF Policy Brief, No 345*, 2022

Climate-related risk and financial stability, with ECB/ESRB Project Team on climate risk monitoring, *ECB Report* and *ESRB Report*, 2021;

Corporate zombification: post-pandemic risks in the euro area, with T. Helmersson, B. Mosk, A. Pietsch, B. Ravanetti, T. Shakir, and J. Wendelborn, *ECB Financial Stability Review*, 2021;

EA system-wide scenario analysis of large scale corporate bond downgrades, with A. Bouveret, C. Christophersen, G. Coppins, M. Ferrari, C. Fricke, C. Graciani, S. Hack, P. Jakubik, M. Kaijser, M. Ludwig, A. Monzon, S. Pasqualini, D. Pérez, E. Rancoita, E. Schaanning, M. Sydow, A. Vinci, *ESRB Technical Notes*, 2020;

Euro area banks' sensitivity to corporate decarbonisation, with M. Belloni, R.M. Porcel, and P. Radulova, *ECB Financial Stability Review*, 2020;

Assessing the systemic footprint of euro area banks, with M. Adam, P. Bochmann, M. Grodzicki, M. Montagna, C. Rodriguez d'Acri, and M. Spaggiari, *ECB Financial Stability Review*, 2019;

Journal Publications

Shock amplification in an interconnected financial system of banks and investment funds, with M. Sydow, A. Schilte, G. Covi, M. Deipenbrock, L. Del Vecchio, P. Fiedor, G. Fukker, M. Gehrend, R. Gourdel, A. Grassi, B. Hilberg, M. Kaijser, G. Kaoudis, M. Montagna, T. Piquard, D. Salakhova, N. Tente, *Journal of Financial Stability, 101234*, Feb. 2024;

On the identification of zombie firms, with J. Wendelborn. and T. Shakir, *Aussenwirtschaft 73.1*, page 57, 2023;

Exotic vortex lattices in binary repulsive superfluids, with Ryan Barnett, *Physical Review Letters*, 2019, (*arXiv*);

Vortex lattices in binary mixtures of repulsive superfluids, with Eric Keaveny, Ryan Barnett, *Physical Review A*, 2018, (*arXiv*);

Simulating infinite vortex lattices in superfluids, with Eric Keaveny, Ryan Barnett, *IOP-Journal of Physics: Condensed Matter*, 2016, (*arXiv*); featured on JPhys+;

Fellowships Awards and other experiences

Mentor @ LeadTheFuture (2021-Present)
Member of Mathematics Research committee (Imperial College, 2014-2017)
Member of Teaching Strategy committee (Imperial College, 2013-2017)
Representative of Mathematics PhD students (Imperial College, 2014-2017)
APS Travel grant (New Orleans, 2017)
HAIRS Grant for MBP-SQS Conference (Cape Town, 2016)
Global Fellow at Massachusetts Institute of Technology (Boston, 2015)
International School of Physics Grant (Varenna, 2014)
King's Leadership Award (King's College London, 2013)

Conferences and Seminars

- SSM Conference on Asset and Liability Management, ECB, Frankfurt am Main 2025
- Quantum-readiness for central banks and supervisors, BIS, Basel 2025
- Corporate distress: Scale, Causes, and Consequences (Invited speaker) — SNB and SIAW-HSG Workshop, Zurich 2023
- Monetary Economics and International Finance Summer School — University of Oxford, 2022
- Systemic Risk and Stress Testing — University of Chicago, 2022
- Climate related risks and financial stability (Invited Lecturer) — University of Torino, Torino 2022
- Workshop on Non-Viable Zombie Companies (Panelist) — Joint Vienna Institute, Vienna 2021
- Conference on Systemic Risk Analytics — Bank of Finland and European Systemic Risk Board joint conference, Helsinki, 2021
- Climate Risk Academy — European University Institute, Florence, 2021
- Random Matrix Theory and Networks — Max Planck Institute, Dresden, 2021
- Economics & Complex Systems Journal Club (Invited speaker) — École Polytechnique, Paris, 2020
- Joint ECB-Oxford Workshop on Financial Interconnectedness (Organiser) — Frankfurt am Main 2020
- INET Complexity Economics Seminar (Invited speaker) — Oxford 2019

References

Paul Hiebert
Head of Division
European Central Bank
paul.hiebert@ecb.europa.eu

Costanza Rodriguez d'Acri
Deputy Head of Division
European Central Bank
costanza.rodriguez@ecb.europa.eu