Tarik Roukny

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Finance, Technology, Policy

Employment

	KU Leuven
2024 - now	Associate Professor of Finance @ Faculty of Economics and Business (with tenure)
2018 - 2024	Assistant Professor of Finance @ Faculty of Economics and Business
	Massachusetts Institute of Technology
2016 - 2018	Postdoctoral Research Associate @ Media Lab

Education

	Université Libre de Bruxelles
2016	Ph.D. in Applied Sciences @ École Polytechnique
	Stanford University
2015	Visiting Scholar @ Economics Department (Prof. Matthew O. Jackson)
	University of Cambridge
2014	Fellow @ Isaac Newton Institute
	University of Oxford
2014	Wiener-Anspach Fellow @ Said Business School
	Universidad Politècnica Madrid
2010	Exchange @ Artificial Intelligence Department
	Université Libre de Bruxelles
2011	M.Sc. in Computer Science Engineering @ École Polytechnique
2009	B.Sc. in Applied Sciences @ École Polytechnique

Policy Experience

	European Commission
2021 - 2022	Policy Consultant @ Digital Finance Unit
	National Bank of Belgium
2019 - 2021	External Researcher
	European Systemic Risk Board
2018	Visiting Financial Stability Expert
2016	Research Consultant
	European Central Bank
2015	Trainee Program
	Deutsche Bundesbank
2013 - 2015	External Researcher @ Department of Research
2013	Internship @ Department of Research (Dr. Co-Pierre Georg)

Other Affiliations

	European Securities and Market Authority
2023 - now	Member of the Consultative Working Group
	Institute of Statistics and Analysis
2023 - now	Effective member of the Scientific Council for the city of Brussels
	Working Group on Central Bank Digital Currency
2021 - now	Expert group chaired by the National Retail Payments Committee of Belgium
	King Baudouin Foundation
2019 - 2022	President of the expert committee of the Fund for Financial Literacy

Research highlights

2024 **Asset Overhang and Technological Change**
with Hans Degryse (KUL) and Joris Tielens (NBB)
*Conditionally Accepted at the **Review of Financial Studies***

2022 **Decentralised Finance (DeFi): information frictions and public policies**
European Commission, Directorate-General for Financial Stability, Financial Services and Capital Markets Union, (2022). Publications Office of the European Union

2021 **Compressing Over-the-Counter Markets**
with Marco D'Errico (ESRB)
Operations Research Volume 69, No 6.
- ESRB Ieke van den Burg Prize 2017
- ECMI Best Paper 2020

2018 **Interconnectedness as a Source of Uncertainty in Systemic Risk**
with Stefano Battiston (UZH) and Joseph E. Stiglitz (Columbia University)
Journal of Financial Stability, Volume 35, 93-106

2016 **The Price of Complexity in Financial Networks**
with Stefano Battiston (UZH), Guido Caldarelli (IMT), Robert May (Oxford University) and Joseph E. Stiglitz (Columbia University)
Proceedings of the National Academy of Science (PNAS), 2016 113 (36) 10031-10036

Working Papers

2024 **Asset Overhang and Technological Change**
with Hans Degryse (KUL) and Joris Tielens (NBB)
*Conditionally Accepted at the **Review of Financial Studies***
a previous version circulated as "Banking Barriers to the green economy"
Coverage: ECB Strategy Review, VoxEU, EconPol

2020 **Vertically Disintegrated Platforms**
with Christoph Aymanns (QuantCo) and Mathias Dewatripont (ULB)
Proceedings of the 21st ACM Conference on Economics and Computation. p.609, 2020
Available at SSRN 3507355

Journal Publications (full list)

2023 **Financial influence on global risks of zoonotic emerging and re-emerging diseases: an integrative analysis**
with Victor Galaz (Stockholm University), Juan Rocha (Stockholm University), Paula Andrea Sánchez-García (Stockholm University), and Alice Dauriach (Stockholm University)
The Lancet Planetary Health, 7, no. 12., 2023

2022 **Financial wealth and early income mobility**
with Milan van den Heuvel (UGhent), Koen Schoors (UGhent), and Jan Ryckebusch (UGhent)
Humanities & Social Sciences Communications, Nature Group, 9(1), pp.1-10., 2022

2021 **Compressing Over-the-Counter Markets**
with Marco D'Errico (ESRB)
Operations Research Volume 69, No 6.
- ESRB Ieke van den Burg Prize 2017
- ECMI Best Paper 2020
Coverage: M. Draghi (ECB President): Welcome remarks at the third annual conference of the ESRB; International Financing Review (Thomson Reuters); Revision of the European Market Infrastructure Regulation (European Systemic Risk Board)

2020 **Generalists and Specialists in the Credit Market**
with Daniel Fricke (UCL - LSE - Deutsche Bundesbank)
Journal of Banking and Finance, Volume 112, 105335

2018 **Interconnectedness as a Source of Uncertainty in Systemic Risk**
with Stefano Battiston (UZH) and Joseph E. Stiglitz (Columbia University)
Journal of Financial Stability, Volume 35, 93-106
Coverage: Bloomberg Businessweek, El Financiero, FNRS Magasine

2016 **The Price of Complexity in Financial Networks**
with Stefano Battiston (UZH), Guido Caldarelli (IMT), Robert May (Oxford University) and Joseph E. Stiglitz (Columbia University)
Proceedings of the National Academy of Science (PNAS), 2016 113 (36) 10031-10036
Coverage: Bloomberg, Business World, Trends, L'Avenir

2013 **Default Cascades in Complex Networks: Topology and Systemic Risk**
with Hugues Bersini (ULB), Hugues Pirotte (ULB), Guido Caldarelli (IMT Lucca) & Stefano Battiston (ETH Zurich)
Scientific Reports, Nature Group, Volume 3: 2013
Coverage: IMF Research Bulletin, La Libre, Knack

Policy Papers

2022 **Decentralised Finance (DeFi): information frictions and public policies**
European Commission, Directorate-General for Financial Stability, Financial Services and Capital Markets Union, (2022). Publications Office of the European Union
Coverage: Coindesk, TheBlock, Forbes, TheDefiant, Competition Policy International

2018 **Compressing OTC Markets - Policy Brief**
Research Bulletin, MIT Golub Center for Finance and Policy, 04/2018

2016 **Shedding lights on dark markets: first insights from the new EU-wide OTC derivative dataset**
with Jorge Abad (CEMFI), Inaki Aldasoro (BIS), Christoph Aymanns (LSE), Marco D'Errico (UZH), Linda Fache Rousova (ECB), Peter Hoffman (ECB) and Sam Langfield (ESRB)
Occasional Paper No. 11/16, European Systemic Risk Board
Coverage: M. Draghi (ECB President): Welcome remarks at the third annual conference of the ESRB; V. Constâncio (ECB Vice-President): "Macroprudential stress-tests and tools for the non-bank sector"; V. Constâncio (ECB Vice-President): "Macroprudential policy in a changing financial system"; M. Draghi (ECB President): ESRB annual conference welcome address; CentralBanking.com: "ESRB publishes guide to OTC derivatives database"; Philip Lane (Central Bank of Ireland Governor): "The Management of Systemic Risks: Current Priorities"; Andy Haldane (Bank of England Chief Economist) : "Will Big Data Keep Its Promise?"

2014 **A Network Analysis of the Evolution the German Interbank Market**
with Co-Pierre Georg (Deutsche Bundesbank) & Stefano Battiston (UZH)
Discussion Paper, Deutsche Bundesbank, no 22/2014

Awards and Grants

2021	Best Teaching Award - Faculty of Economics and Business, KU Leuven
2021-2025	BOF grant - single promotor (200k EUR)
2020	Best Paper Award - European Capital Markets Institute (ECMI)
2019	Best Teaching Award - Faculty of Economics and Business, KU Leuven
2019	National Bank of Belgium initiative on Climate Change (30k EUR)
2018	Seed Research Grant, KU Leuven (100k EUR)
2017	Young Research Initiative Fellow, United Nations Trade and Development Conference
2017	Winner of the ESRB Ieke van den Burg Prize 2017
2016	Visiting Expert Grant, European Central Bank (ECB)
2015	US Visiting Grant, Belgian National Science Foundation (FRS-FNRS)
2014	Isaac Newton Fellowship, INI Program Systemic Risk, Cambridge University
2014	Project Support Grant, Wiener Anspach Foundation, Oxford University
2013-2015	Visiting Fellowship, Deutsche Bundesbank
2012-2016	Belgian National Science Foundation (FRS-FNRS) Fellowship
2011-2012	Seed Financing Doctoral Grant, National Bank of Belgium

Academic Activities

Teaching **Data Science for Finance**
Master of Business Administration - Fall 2024 - now
KU Leuven, Faculty of Economics and Business
Modern Banking and Financial Technology
Master of Business Administration - Spring 2020 - now
KU Leuven, Faculty of Economics and Business
Banking
Master of Business Administration - Spring 2019
KU Leuven, Faculty of Economics and Business
Principles of Scientific Programming
Master of Quantitative Finance - Fall 2014
Solvay Brussels School of Economics and Management

Referee Management Science (Informs), Operations Research (Informs), Journal of Banking and Finance (Elsevier), Journal of Financial Stability (Elsevier), European Central Bank Working Paper Series, Journal of Financial Services Research (Springer), European Journal of Operational Research (Elsevier), Journal of Network Theory and Finance (Risk), Scientific Reports (Nature Group), Journal of Complex Networks (Oxford), Plos ONE (PLoS), EPJ Data Science (Springer), Physica A (Elsevier), Advances in Complex Systems

Organisation KUL Finance Seminar Fall 2019, Spring 2020 (Leuven), Belgium Finance Research Seminar (in collaboration with National Bank of Belgium) (Brussels), GraphNet Seminars at ULB (Brussels), Deutsche Bundesbank Conference on Networks 2013 (Frankfurt), BENet 2014 (Brussels), BESC 2014 (Shanghai), BESC 2015 (Nanjing), Network Models and Stress-testing - CEMLA 2015 (Mexico), Regulatory Dataframeworks Workshop - ESRB (Frankfurt), Network Models and Stress-testing - CEMLA 2017 (Mexico), Postdoc Seminar Series at MIT Media Lab (Boston), Cryptovalley Conference (Zug), Complex Networks 2018 (Cambridge), 4th Benelux Banking Research Day (Brussels)

Computer Skills

C, C++, JAVA, HTML, CSS, PHP, SQL, MATLAB, R, Python, STATA, Qt, OpenGL, LISP, Perl, Bash, MS Office, Latex, Django, Git, Bootstrap

Languages

French (native), English (fluent), Spanish (fluent), Dutch (good), Arabic (basic)

last update: May 2024