



Call for Papers for Springer Open Access Book

“Systemic Risk and Complex Networks in Modern Financial Systems”

Vincenzo Pacelli (Editor)

A call for papers (essays) is proposed for essays to be included in the book titled “*Systemic Risk and Complex Networks in Modern Financial Systems*” (Edited by Vincenzo Pacelli) which will be published in open access by Springer and candidate for the book series “New Economic Windows” (indexed in Scopus, SCImago and zbMATH) <https://www.springer.com/series/6901>

Abstract and Book’s Objective

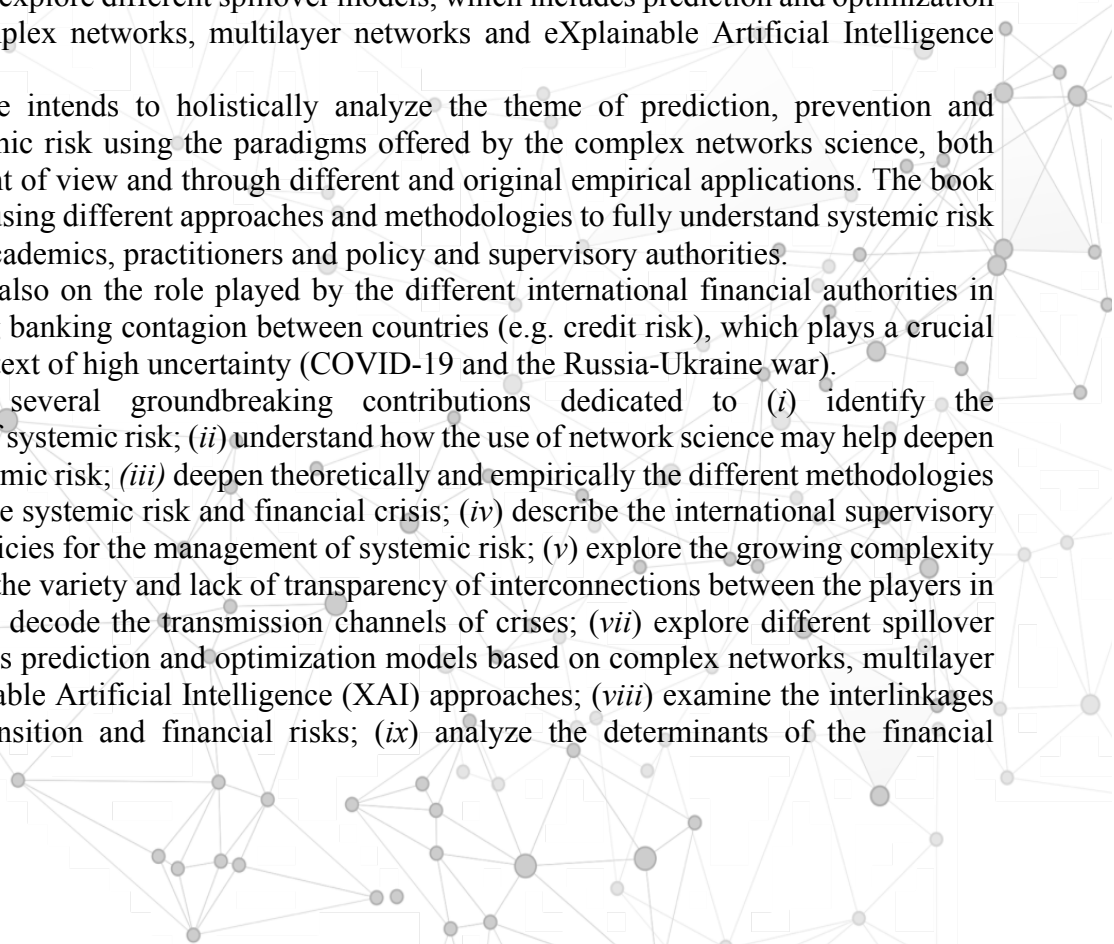
The crises of the last fifteen years have underlined how much modern financial systems are today more exposed and vulnerable to systemic risk, defined as the risk of uncontrolled propagation of a crisis of a single player or area of an economic system to a wider system. Systemic risk is more relevant today than in the past due to the growing complexity of economic systems, the variety and lack of transparency of interconnections between the players in financial systems and the increasing speed of flows of goods, money and people. All this prompts us to reflect on the need to holistically analyze, predict and manage systemic risk through logical-conceptual schemes that can be borrowed from the networks science.

This volume aims to holistically investigate both empirically and theoretically the evolution of systemic risk in modern financial systems, from identifying its components (characteristics) to its measurement and the tools to forecast, decode propagation channels and risk mitigate. In recent years, the empirical evidence of the crises propagation underlines a significant question of method which pertains to the most appropriate methodologies to understand and decode the transmission channels of crises, identifying the linkages between the actors (banks, firms, financial companies, households and sovereign entities) in the system and between physical, transition and financial risks. For this purpose, the book will explore different spillover models, which includes prediction and optimization models based on complex networks, multilayer networks and eXplainable Artificial Intelligence (XAI) approaches.

Therefore, the volume intends to holistically analyze the theme of prediction, prevention and management of systemic risk using the paradigms offered by the complex networks science, both from a theoretical point of view and through different and original empirical applications. The book will address the topic using different approaches and methodologies to fully understand systemic risk and offer insight for academics, practitioners and policy and supervisory authorities.

The book sheds light also on the role played by the different international financial authorities in limiting and managing banking contagion between countries (e.g. credit risk), which plays a crucial role in the current context of high uncertainty (COVID-19 and the Russia-Ukraine war).

This volume aims several groundbreaking contributions dedicated to (i) identify the multidimensionality of systemic risk; (ii) understand how the use of network science may help deepen the knowledge of systemic risk; (iii) deepen theoretically and empirically the different methodologies to forecast and measure systemic risk and financial crisis; (iv) describe the international supervisory infrastructures and policies for the management of systemic risk; (v) explore the growing complexity of economic systems, the variety and lack of transparency of interconnections between the players in financial systems; (vi) decode the transmission channels of crises; (vii) explore different spillover models, which includes prediction and optimization models based on complex networks, multilayer networks and eXplainable Artificial Intelligence (XAI) approaches; (viii) examine the interlinkages between physical, transition and financial risks; (ix) analyze the determinants of the financial contagion.



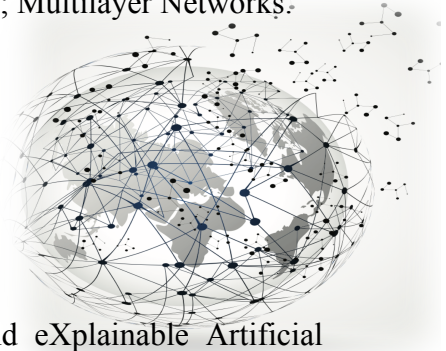
Keywords

Systemic Risk; Complex Networks; Financial Crisis; Crises' Transmission Channels; Financial Contagion; Forecasting Methods; eXplainable Artificial Intelligence (XAI); Multilayer Networks;

Topics and areas of interest

Essays on the following topics are invited:

- ✓ Systemic risk;
- ✓ Financial crisis and contagion;
- ✓ Crises' transmission channels;
- ✓ Networks science in banking and finance;
- ✓ Forecasting methods;
- ✓ Spillover models as complex networks, multilayer networks and eXplainable Artificial Intelligence (XAI) approaches;
- ✓ Interconnections in financial systems;
- ✓ Financial regulation and supervision on systemic risk;
- ✓ Interlinkages between physical, transition and financial risks.



Publication

All the accepted essays will be published in the book titled “*Systemic Risk and Complex Networks in Modern Financial Systems*” (Edited by Vincenzo Pacelli) which will be published in open access by Springer and candidate for the book series “New Economic Windows” (indexed in Scopus, SCImago and zbMATH) <https://www.springer.com/series/6901>

The authors will not be asked for any publishing fees or charges. All publication and open access costs will be covered by the Editor.

Timetable and Submission Deadline

Extended abstract submission deadline: 30th June 2023

Notification of authors of accepted papers: 14th July 2023

Full paper submission deadline: 30th December 2023

Extended abstracts and full papers must be sent by email to the Editor to the following email address: vincenzo.pacelli@uniba.it

