

## Special Issue on Stochastic Dynamics in Finance and Economics

# CALL FOR PAPERS

Stochastic dynamics plays a crucial role in unraveling the complex and uncertain nature of financial and economic systems. Recent years have witnessed a surge in interest due to its ability to offer insights into market behaviors, macroeconomic phenomena, and decision-making under uncertainty. Challenges such as modeling market volatility, incorporating high-frequency data, and managing systemic risk underscore the critical need for advancements in stochastic modeling and analysis. This special issue seeks contributions that offer novel and original perspectives in stochastic dynamics. We encourage researchers to explore innovative approaches and methodologies, particularly in dealing with high-dimensional and non-linear dynamics. Unique insights into the stochastic nature of economic and financial phenomena are highly valued, along with contributions that push the boundaries of current modeling techniques.

The field of stochastic dynamics in finance and economics faces several pressing challenges that warrant attention. First, there is a need to develop more sophisticated models that capture the intricate interactions between various sources of uncertainty, such as market volatility, economic shocks, and behavioral factors. Also, the increasing availability of high-frequency data poses challenges in developing robust estimation techniques and incorporating real-time information into stochastic models. Furthermore, the growing interconnectedness of global financial markets and the presence of systemic risk call for advanced methodologies to assess and manage risks under conditions of uncertainty.

This special issue aims to bring together contributions that address the above challenges and contribute to the advancement of stochastic dynamics in finance and economics. We encourage submissions that develop sophisticated models capturing interactions between various sources of uncertainty, address challenges posed by high-frequency data in model estimation and real-time information integration, advance methodologies for risk assessment and management in interconnected global financial markets, explore the connections between stochastic dynamics, financial regulation, and policy implications. Advancements in stochastic dynamics hold significant practical implications for real-world decision-making and policy development. Findings from this special issue can inform risk management strategies, improve market forecasting accuracy, and guide policymakers in designing robust financial regulations. Concrete examples and case studies demonstrating the application of research outcomes can highlight the tangible benefits to industry practitioners and policymakers. Interdisciplinary dialogue and collaboration are vital in addressing the multifaceted challenges at the intersection of stochastic dynamics, finance, and economics. We welcome submissions from researchers with diverse backgrounds and expertise, including mathematicians, economists, finance professionals, and policy analysts.

Potential topics include but are not limited to the following:

- ▶ Asset pricing with stochastic processes
- ▶ Computational finance and economics
- ▶ Financial derivatives
- ▶ Economic and financial modeling
- ▶ Stochastic dynamics in economic forecasting
- ▶ Operations research with stochastic dynamics
- ▶ Risk management with stochastic dynamics
- ▶ Portfolio optimization with stochastic dynamics

Authors can submit their manuscripts through the Manuscript Tracking System at <https://review.wiley.com/submit?specialIssue=814933>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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