

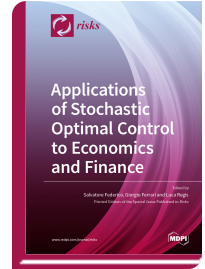
Special Issue Reprint

Applications of Stochastic Optimal Control to Economics and Finance

www.mdpi.com/books/reprint/2421

Edited by
Salvatore Federico
Giorgio Ferrari
Luca Regis

ISBN 978-3-03936-058-1 (Hardback)
ISBN 978-3-03936-059-8 (PDF)



In a world dominated by uncertainty, modeling and understanding the optimal behavior of agents is of the utmost importance. Many problems in economics, finance, and actuarial science naturally require decision makers to undertake choices in stochastic environments. Examples include optimal individual consumption and retirement choices, optimal management of portfolios and risk, hedging, optimal timing issues in pricing American options, and investment decisions. Stochastic control theory provides the methods and results to tackle all such problems.

This book is a collection of the papers published in the Special Issue “Applications of Stochastic Optimal Control to Economics and Finance”, which appeared in the open access journal *Risks* in 2019. It contains seven peer-reviewed papers dealing with stochastic control models motivated by important questions in economics and finance. Each model is rigorously mathematically funded and treated, and the numerical methods are employed to derive the optimal solution. The topics of the book’s chapters range from optimal public debt management to optimal reinsurance, real options in energy markets, and optimal portfolio choice in partial and complete information settings. From a mathematical point of view, techniques and arguments of dynamic programming theory, filtering theory, optimal dimensional diffusions and multi-dimensional jump processes are used.

MDPI Books offers quality open access book publishing to promote the exchange of ideas and knowledge in a globalized world. MDPI Books encompasses all the benefits of open access – high availability and visibility, as well as wide and rapid dissemination. With MDPI Books, you can complement the digital version of your work with a high quality printed counterpart.



Open Access

Your scholarly work is accessible worldwide without any restrictions. All authors retain the copyright for their work distributed under the terms of the Creative Commons Attribution License.



Author Focus

Authors and editors profit from MDPI's over two decades of experience in open access publishing, our customized personal support throughout the entire publication process, and competitive processing charges as well as unique contributor discounts on book purchases.



High Quality & Rapid Publication

MDPI ensures a thorough review for all published items and provides a fast publication procedure. State-of-the-art research and time-sensitive topics are released with a minimum amount of delay.



High Visibility

Due to our global network and well-known channel partners, we ensure maximum visibility and broad dissemination. Title information of books is sent to international indexing databases and archives, such as the Directory of Open Access Books (DOAB), and the Verzeichnis Lieferbarer Bücher (VLB).



Print on Demand and Multiple Formats

MDPI Books are available for purchase and to read online at any time. Our print-on-demand service offers a sustainable, cost-effective and fast way to publish MDPI Books printed versions.