



UvA-DARE (Digital Academic Repository)

Essays in nonlinear dynamics in economics and econometrics with applications to monetary policy and banking

Wolski, M.

[Link to publication](#)

Citation for published version (APA):

Wolski, M. (2014). Essays in nonlinear dynamics in economics and econometrics with applications to monetary policy and banking

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <http://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

This thesis explores the highly nonlinear profile of the modern financial world and assesses its relevance in monetary policy conduct and macroprudential supervision. It focuses on three possible different origins of nonlinear structures. Firstly, we study the role of the heterogeneous and boundedly rational expectations in driving the aggregate economic dynamics. Secondly, we investigate the irregularities of probability distributions and their consequences for quantitative inference. Thirdly, we assess the behavior of the global asset network through a prism of complex systems. Because of its extraordinary relevance in the real world, a lot of attention is being paid to the banking side of the economy. The practical goal of this thesis is to provide the tools and general directions on how to incorporate possible nonlinear dependencies into existing economic modeling techniques. In times of very non-standard policy actions, these tools might prove to be of great importance as they offer more robust and flexible approaches to financial modeling and forecasting.

Marcin Wolski (1988) holds a B.A. in Economics and a B.A. in Quantitative Methods in Economics and Information Systems from the Warsaw School of Economics, Poland (2010), and an M.Sc. in Economics from the Tilburg University, the Netherlands (2011). In 2011 he joined the European Doctorate in Economics - Erasmus Mundus, a joint PhD degree at the University of Amsterdam and Bielefeld University. His research interests include monetary policy, systemic risk, financial networks, time series analysis, complex systems and agent-based models.

Marcin Wolski

Essays in Nonlinear Dynamics in Economics and Econometrics

Marcin Wolski

Essays in Nonlinear Dynamics in Economics and Econometrics

with Applications to Monetary Policy
and Banking

