



UvA-DARE (Digital Academic Repository)

Essays on nonparametric econometrics of stochastic volatility

Zu, Y.

Publication date
2012

[Link to publication](#)

Citation for published version (APA):

Zu, Y. (2012). *Essays on nonparametric econometrics of stochastic volatility*. [Thesis, fully internal, Universiteit van Amsterdam]. Thela Thesis.

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: <https://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.

Acknowledgements

I am greatly indebted to my supervisor and promotor Peter Boswijk, for bringing me into the realm of volatility, for the understanding, encouragement and support on my research projects, and for helpful and valuable supervision, guidance as well as cooperation.

I would like to express my deep gratitude to the other members of my thesis committee, Dick van Dijk, Bert van Es, Jan Kiviet and Dennis Kristensen, for reading the manuscript and providing very helpful and constructive comments.

I am grateful to all who helped improve this thesis. Chapter 2 of the thesis benefits from helpful discussions and comments from Peter Hansen, Shin Kanaya, Bas Klein, Dennis Kristensen, Per Mykland, Roel Oomen, Neil Shephard, Kevin Sheppard, Georg Strasser, Aad van der Vaart, Almut Veraart and Lan Zhang. Chapter 3 benefits from comments from Charles Bos, Zhengyuan Gao and Donald Andrews. Chapter 4 benefits from discussions and correspondence with Peter Spreij, Bert van Es, Aurore Delaigle, Cees Diks, Jan de Gooijer and Philippos Papadopoulos. Of course, all remaining errors are my own. Part of the research of Chapter 2 was conducted during my visit to the Oxford-Man Institute of Quantitative Finance; the hospitality of the institute is gratefully acknowledged.

The Department of Quantitative Economics at UvA and the Tinbergen Institute provide a unique environment for doing research in econometrics, and I am grateful to all my colleagues and staff members for their support and help. Special thanks go to Cees Diks and Jan de Gooijer, who carefully read some of my drafts and gave very helpful comments. I thank Charles Bos for beneficial talks on volatility, as well as his kind help when I had questions about Ox programming. I also thank Pawel Janus for generously sharing his Ox code.

Although not directly related to this thesis, I would still like to thank Li Zhuo and He Yao at Wuhan University, and Bertrand Melenberg at Tilburg University for helping me shape my early interests in econometrics and financial econometrics.

I greatly learned from taking courses from, talking to and meeting with the math-

ematicians at UvA, VU and Utrecht University. I thank Peter Spreij, Chris Klaassen, Bert van Es, Aad van der Vaart, Bas Klein, Eduard Belitser and Sasha Gnedin for their expertise, insights, time and valuable help.

Generous financial support from the Department of Quantitative Economics at UvA, the Tinbergen Institute and the C. Willems Stichting are gratefully acknowledged. I thank Adriaan Soetevent and Arianne de Jong for their help in applying for funding from the C. Willems Stichting. And I thank Kees Nieuwland, Andries Jansen and Ida Delponte for excellent administrative assistance.

I would also like to thank all my friends who helped me enjoy my stay in the Netherlands. Especially I want to mention the colleagues joining the (informal) UvA-Econometrics noon coffee group; players at the BallaBalla indoor soccer pickup games; and my Chinese friends Yang Nan and Yang Yang, Qin Bo and Kuang Yu, Bao Te and Dai Yun, Zhou Chen and Wang Yijing, Huang Zhenxing and Xie Dan, Lin Fan and Xu Huijing, Ding Qiqing and Yang Shengyun, Gao Zhengyuan, Shen Xiaoyu, Zhang Xin, Yang Xiye, Huang Tiantian, Li Chen, Li Zhihua, Li Chang, and Liu Jia for their help and encouragement, and for the good times we had in the beer happy hour, cooking exotic food, playing Ping Pong, and playing card games.

My deepest gratitude goes to my family. My parents have always been ready to show their understanding, trust and support for the interests that I pursue, to the greatest extent they can have — I am indebted to them. My wife Li Wei came together with me to the Netherlands, she is always my source of power and brings me a lot of happiness every day, and this thesis is dedicated to her.