

# VU Research Portal

## **Panta rhei, measurement and discovery of change in financial markets**

Zamojski, M.J.

2017

### **document version**

Publisher's PDF, also known as Version of record

[Link to publication in VU Research Portal](#)

### **citation for published version (APA)**

Zamojski, M. J. (2017). *Panta rhei, measurement and discovery of change in financial markets*. Tinbergen Institute.

### **General rights**

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal ?

### **Take down policy**

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

### **E-mail address:**

[vuresearchportal.ub@vu.nl](mailto:vuresearchportal.ub@vu.nl)

# Acknowledgements

*“Begin at the beginning”, the King said gravely, “and go on till you come to the end: then stop.”*

— Lewis Carroll, *Alice in Wonderland*

As I write these words, I feel not only pride and a sense of accomplishment, but also gratitude to the many people who supported and inspired me. Your contributions are honoured in my heart and, in an imperfect way, on these pages.

First, I would like to thank my supervisors: André Lucas, Siem Jan Koopman, Arjen Siegmann, and Denitsa Stefanova. It is a privilege to be able to work with you and I was truly blessed to have you on my team. From the very beginning, we took big risks and shot for the moon. This journey has been filled with successes, occasional rejections, and intellectual challenges. At no point in time have I ever felt alone in this process. All of you have contributed tremendously to the papers which constitute this thesis. From setting up the projects, through execution, and writing, I always had my team on my side. These are truly our projects, our ideas, and our work together. I have learned a lot from you on how to do research and treat others.

Special thanks go to André who at times believed in me more than I did myself. I appreciate that your door was always open and that you were always eager to talk. Our chats over Fanta are among my most cherished memories from Amsterdam. I am also grateful to Denitsa for her support and, most importantly, her friendship. Finally, I would like to thank Arjen for the book he once gave me and for listening to me talking about donkeys and carrots.

The 6 years I spent in Amsterdam have been witness to some of my best and worst moments in life. I was lucky to have been surrounded by wonderful people with whom I could share the good times and find support in bad times. I would like to thank Piotr Denderski for his friendship. Even though I was not expecting it at the beginning, Piotrek is a sure friend and makes himself known in unsure times. I am also grateful to Rutger Lit for his friendship and the help he so eagerly offered along the way. I do not know where we are on the scale, but I am glad we share one. I thank Lisette Swart for making an effort at the beginning and giving me the gift of friendship. I would also like to thank Brian Aliendre for listening when I needed to talk and teaching me about restraint. I am also grateful to Yueshen (Bart) Zhou for his friendship and teaching me how to play a watered-down version of a Japanese game. I would like to thank Łukasz Marć for not freaking out when I over-shared at the beginning and being a friend ever since. Finally, I would like to thank Pedro Custódio for letting me see my happy reflection in his brown eyes. I am lucky to have you all in my life.

I am also grateful to my wonderful friends who supported me from afar. I thank Anna (Marciniak) Breitenmoser, Tomasz Dudziński, Judyta (Jutkowska) Sawicka, Małgorzata Wójcik, and Marcin Komorowicz for their true friendships. We shared some great adventures and deep conversations.

Special thanks go to my ever-growing skating family. I would like to thank Agata Paśko, Jolanta Baryła, and Krzysztof Paśko for their friendship and welcoming me into their home on so many occasions. Your family is truly one of a kind. I would like to thank Dorota Szparaga for sharing this great passion with me. Our skating taught me a lot about how to replace 'I' with 'we' on the ice and away from it. I would also like to thank Astrid Gebe for the extremely fun times we had together. I am also grateful to Aneta Kowalska for listening when I needed to talk and offering her friendship to me. Finally, I am so very happy that I once, accidentally, sat down next to Yuki Hoshino to watch short programme at Trophée Éric Bompard.

But it took an even bigger village for me to get to this point. In no particular order,

I would like to further thank Andrzej Sławiński for making an exception that started it all and for helping me make the right choice in 2010; Lucyna Górnicka, Małgorzata Popławska, and Violeta Misheva for the fun times we shared while cooking and fixing bikes; Albert Menkveld for steering me towards the global optimum; Arianne de Jong for her excellent work at TI; Christina Mansson for the tremendous work she did during my job market period; Debby Tielman for the excellent secretary work, support at VU, and the conversations we had; Elizaveta Mirgorodskaya for our uncompromising conversations; Ester van den Bragt for her excellent work at TI; Guangyao Zhu, Mia Fang, Tong Wang, and Hao Zhang for teaching me how to play Chinese games; Natalya Martynova for the great talks we had, your advice in the job market, and the fun (and ‘fun’) times we shared in U.S.; Judith van Kronenburg for her excellent work at TI; Robert Golański for the long talks about dots many years ago; Ton Vorst for his kindness and understanding in 2011; Lin Zhao for the friendship we had. I am also grateful to Andries van Vlodrop, Janko Cizel, Cezary Wójcik, Jiangyu Ji, Justyna Kowal, Karolina Ryszka, Lerby Ergun, Lydia Geijtenbeek, Inez Zwetsloot, and Olga Zajkowska.

Zbigniew Zamojski, I hope I have made you proud.

Last, but as far from least as possible, I would like to thank my parents—Jan and Joanna—who have been the best parents I could have wished for. Mamo i Tato, przez ostatnie 6 lat wiele się zmieniło. Zarówno ja, jak i Wy, musieliśmy się wiele nauczyć i dużo zrozumieć. Przez cały ten okres, zawsze wiedziałem, że mogę na Was liczyć. Prawda jest taka, że bez Was nigdy nie byłbym w stanie tego osiągnąć. Jesteście najlepszymi rodzicami o jakich mógłbym marzyć. Jestem Wam dozgonnie wdzięczny za to wspaniałe życie, które mi daliście, i za Waszą ciągłą w nim obecność.

*There is no end. I cannot stop.*