

HABILITATION THESIS REVIEWER'S REPORT

Masaryk University

Applicant

Ing. Tomáš Plihal, Ph.D.

Habilitation thesis

Essays on Volatility Modeling: The Effect of Expected and Unexpected Events

Reviewer

Prof. Dr. Peter Schwendner

**Reviewer's home unit,
institution**

Zurich University of Applied Sciences

The habilitation thesis includes an introductory chapter and six articles on realized volatility modelling and forecasting. All six articles are published in high-quality international journals and address different aspects of realized volatility: relevance of implied volatility of different tenors for realized FX volatility forecasting, higher versus lower frequency data for realized FX volatility forecasting, the impact of central bank announcements of stock market volatility, macro versus crypto-specific news impact on bitcoin volatility, and two studies of specific crises periods: the impact of the COVID-19 crisis on a cross section of international stock market volatility, and the impact of the Russian attack on Ukraine on FX volatility. The six articles clearly demonstrate the ability of the candidate to conduct independent research, to approach a relevant topic from several different viewpoints and to adapt state-of-the-art methods to answer relevant, interesting and timely research questions for an international audience. The thesis also presents clear summaries of all papers and cites the relevant literature and is a pleasure to read. All six articles show important innovations beyond the current academic literature, are well published and give valuable insights for both researchers and practitioners from risk management and portfolio management.

Reviewer's questions for the habilitation thesis defence:

The author is an expert in various modelling approaches of realized volatility. I would be interested to get his view on how he could expand his future research for generating trading decisions, and if a more granular modelling of implied volatility and higher moments of realized returns could be useful. Some interesting directions could be the variance risk premium discussed by Bollerslev, Tauchen and Zhou 2009, the concept of uncertainty shocks as discussed by Dew-Becker, Giglio and Becker 2021 and the classification of "good and bad" carry currencies by Bekaert and Panayotov 2019.

Conclusion

The habilitation thesis entitled *Essays on Volatility Modeling: The Effect of Expected and Unexpected Events* by Ing. Tomáš Plihal, Ph.D. **fulfils** requirements expected of a habilitation thesis in the field of Finance.

Date: 5.12.2022

Signature:

