

Report on Bachelor / Master Thesis

Institute of Economic Studies, Faculty of Social Sciences, Charles University

Student:	Oleg Alekseev
Advisor:	prof. Ing. Janda Karel, Dr., Ph.D., M.A.
Title of the thesis:	Electric Vehicle Manufacturers and Battery Raw Materials Market

OVERALL ASSESSMENT:

Short summary

The author applied a ARJI-GARCH model to study the effect of Electric Vehicle (EV) battery raw materials price volatility on EV producers stock returns using daily price data from January 1, 2015 to March 31, 2023. The author failed to reject the hypothesis that jumps exist in the EV battery raw materials market. Finally, the author also shows that the ARJI-GARCH model has a better goodness-of-fit than the GARCH(1,1) model.

Contribution

From my point of view, the thesis can be seen as an extension of the current literature in Applied Econometrics with particular focus on price volatility.

Methods

The tools used are relevant to the research question being investigated and these are slightly higher level tools than the required level of studies for the thesis. However, it doesn't seem that robustness test have been performed with different priors and Dellaportas and Politis (2000) is wrongly criticised with this respect. The word „predict“ is incorrectly used in the thesis and suggests for a misunderstanding of the difference estimation/prediction. Further, the word „maximum“ is used instead of „optimum“ in section 2.4. Finally, the author names „non-Bayesian“ the frequentist approach.

Literature

In my view, the reference to the literature is relevant and sufficient. However, the author sometimes quotes literature in an improper way (e.g., beginning of section 2.2).

Manuscript form

The thesis is well structured, written with an appropriate language and style. The text effectively refers to graphs and tables and disposes with a complete bibliography. However, some sentences are placed in the inappropriate section (e.g., conclusion sentence in the introduction). Furthermore, it is sometimes not specified what abbreviations stands for (e.g., WTI and ETF). Finally, there is no page numbering and the section 2.4 is numbered 2.5.

Overall evaluation and suggested questions for the discussion during the defense

In my view, the thesis fulfills the requirements for a bachelor thesis at IES, Faculty of Social Sciences, Charles University, I recommend it for the defense and suggest a grade B. The results of the Turnitin analysis do not indicate significant text similarity with other available sources.

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SUMMARY OF POINTS AWARDED:

CATEGORY	POINTS
<i>Contribution</i> (max. 30 points)	30
<i>Methods</i> (max. 30 points)	22
<i>Literature</i> (max. 20 points)	18
<i>Manuscript Form</i> (max. 20 points)	15
TOTAL POINTS (max. 100 points)	85
GRADE (A – B – C – D – E – F)	B

NAME OF THE REFEREE: MATHIEU PETIT

DATE OF EVALUATION: 2023-05-14

*Digitally signed (14. 5. 2023):
Mathieu Petit*

Referee Signature

