

Report on Master Thesis

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

Student:	Lenka Röhryová M.Sc.
Advisor:	doc. PhDr. Ladislav Křišťoufek, Ph.D.
Title of the thesis:	Extending volatility models with market sentiment indicators

OVERALL ASSESSMENT (provided in English, Czech, or Slovak):

Please provide your assessment of each of the following four categories, summary and suggested questions for the discussion. The minimum length of the report is 300 words.

Contribution

The idea of the thesis is interesting and up-to-date – utilizing online data about stocks to improve forecasting accuracy of one of the standard financial economics models of volatility (heterogeneous autoregressive model - HAR). Specifically, the HAR model has been extended by two types of data – Tweets relevant for the analyzed companies and Google search queries. Based on the existing literature, such series could improve the volatility models as they might cover more information than a simple autoregressive model (or HAR) could, specifically they could cover information about (short-term) market sentiment. The Twitter part of the series turned out to be the problematic one as the data is not freely available and the author needed to depend on a readily-available dataset that is, unfortunately, rather short. Nevertheless, the contribution to the current literature is still there – the online data can improve the volatility models but it is not a universal feature of the stocks.

Methods

The applied methods are quite standard for the diploma thesis at IES. The analysis has been performed well and according to the standards.

Literature

The covered literature is fine with respect to the methods and the main motivation of the thesis. However, I miss a more detailed review of the literature on using online data in financial modeling.

Manuscript form

The thesis is well structured and it reads nicely. I find no issues here. I could imagine nicer and more coherent figures throughout the text.

Summary and suggested questions for the discussion during the defense

Overall, this is a nice thesis that utilizes relatively standard techniques but in a new environment. The results contribute to the literature as such analysis has not been done yet. It needs to be noted that the analysis itself has been quite demanding as presenting the results for 30 stocks in a decent way is not easy, and more so for plethora of different model specifications.

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SUMMARY OF POINTS AWARDED (for details, see below):

CATEGORY	POINTS
<i>Contribution</i> (max. 30 points)	25
<i>Methods</i> (max. 30 points)	27
<i>Literature</i> (max. 20 points)	13
<i>Manuscript Form</i> (max. 20 points)	18
TOTAL POINTS (max. 100 points)	83
GRADE (A – B – C – D – E – F)	B

NAME OF THE REFEREE:

doc. PhDr. Ladislav Krištofek, Ph.D.

DATE OF EVALUATION:

24.1.2018

Referee Signature