

Report on Bachelor Thesis

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

Student:	Tomáš Kvasnička
Advisor:	PhDr. Ladislav Krištofuk
Title of the thesis:	Volume – volatility relation across different volatility estimators

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

The submitted thesis “Volume – volatility relation across different volatility estimators” is a nicely written and well structured thesis comparing various methods of forecasting volatility with an additional stress on traded volume as a potential improvement of the forecasting. In the thesis, Tomas utilizes the realized volatility measure as a proxy of the real volatility. This is a state-of-the-art approach in volatility modeling. Keeping in mind that the realized volatility is based on the high-frequency data which are not available for free, Tomas utilizes the Garman-Klass estimator as the “next best” choice as it is constructed using open-low-high-close prices which are freely available for practically all assets. He then uses the GK estimator in AR, HAR, VAR, VAR-HAR and ARFIMA frameworks to forecast the realized volatility. As a benchmark model, he uses RW and GARCH(1,1) models. Based on the results, the HAR (Heterogeneous Autoregressive Model) dominates all the others. It thus seems that the traded volume does not really add any significant information to the forecasting procedure. Possibilities for future research and extensions are also discussed.

Tomas utilizes several methods which are well above the level of standard bachelor’s thesis, namely the realized volatility, HAR and ARFIMA models. Tomas has consulted the thesis repeatedly and he has been able to include the necessary comments. Therefore, **I suggest the thesis for defense with grade “Excellent” (Grade A).**

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

CATEGORY	POINTS
Literature (max. 20 points)	18
Methods (max. 30 points)	28
Contribution (max. 30 points)	28
Manuscript Form (max. 20 points)	20
TOTAL POINTS (max. 100 points)	94
GRADE (1 – 2 – 3 – 4)	1

NAME OF THE REFEREE: PhDr. Ladislav Krištofuk

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Referee Signature