

Report on Bachelor / Master Thesis

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

Student:	Bc. Petr Žák
Advisor:	PhDr. RNDr. Josef Stráský Ph.D.
Title of the thesis:	Forecasting the Exchange Rate in the Czech Republic Using Non-linear Threshold Models

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

Student Petr Žák decided to investigate the possibilities of exchange rate forecasting. Presented diploma thesis focuses on forecasting CZK/EUR exchange rate using univariate non-linear threshold autoregressive (TAR) models.

The literature review is comprehensive and concise. Exchange rate forecasting in Central-Eastern Europe area is briefly reviewed with particular focus on CZK. Previous studies on different types of TAR models applied for exchange rate forecasting are also appropriately reviewed.

Methodology is well presented, however, methods are rather standard and the thesis does not bring new methodological contribution.

Author performed forecasting procedures separately for data before and after the outset of monetary interventions of Czech National Bank (CNB) (7th November 2013). Performance of forecasts was assessed using TheilU statistics and Diebold-Mariano test. Non-linearity of residuals was appropriately tested using BDS test.

The presentation of results is very technical and lacking extensive commentary which would guide the reader through the results chapter. Main/surprising results should have been pointed out more clearly. Some results are repeated several times – namely tables 5.9 - 5.12 could be merged into one table (the same holds for tables 5.13 – 5.16).

Discussion is appropriately structured and clearly explains the main results of the thesis. Reasoning is based on own results and also referenced previous studies. It was found that the residuals after ARMA modelling shows non-linearity, which should be accounted for. Nevertheless, self-exciting TAR (SETAR) models did not provide satisfactory forecasting performance.

Strong point of the thesis is using dates of the CNB Board meeting as dummy variable. With the use of this dummy, the performance of TAR models improved. It was found that CZK/EUR exchange rate is indeed very hard to forecast. In this respect, the contribution of the thesis is limited. On the other hand, it was found that threshold models are able to remove non-linearity.

The manuscript is well structured and written in very good English. The use of graphical output and tables is appropriate. I did not find any typo or formatting error.

Summary: The thesis meets all obligations for diploma thesis. Literature review, discussion and manuscript form belong to the strengths of the thesis. On the other hand, the thesis could go little 'deeper' into the topic. In case of successful defense, I recommend "Grade 1".

Topic for discussion: Author comments on possible extension of exchange rate forecasting exercise to multivariate models. Student could comment on potential methodological approach and datasets for such multivariate modelling.

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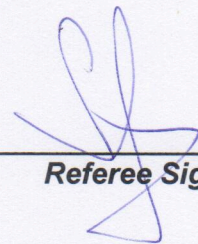
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SUMMARY OF POINTS AWARDED:

CATEGORY		POINTS
Literature	(max. 20 points)	18
Methods	(max. 30 points)	24
Contribution	(max. 30 points)	22
Manuscript Form	(max. 20 points)	17
TOTAL POINTS	(max. 100 points)	81
GRADE	(1 - 2 - 3 - 4)	1

NAME OF THE REFEREE: Josef Stráský

DATE OF EVALUATION: 03.02.2017



Referee Signature