

Report on Bachelor / Master Thesis

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

Student:	Štefan Michlian
Advisor:	Michael Princ
Title of the thesis:	The Impact of Short-term Interest Rate on the Stock Prices in the Czech Republic.

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

The master thesis evaluates impact of short-term interest rates on the stock prices in the Czech Republic using the PX50 Prague stock exchange index between the years 2001 and 2014. The analysis rests on a usage of the GJR-GARCH-t-M, a modification of the GARCH model, which enables to capture specific properties of the analyzed time series.

The employed method is very well presented in the thesis. The author provides a clear definition and explanation of the ARCH model as well as further extensions that eventually lead to the GJR-GARCH-t-M, all necessary equations are stated in the work. I really liked how the tested hypotheses are presented together with a brief explanation of rationale behind each of them.

The literature review is focused mainly on preceding works which applied GARCH model on analyzed issue. Therefore I miss some broader introduction into the topic, i.e. some works that would explain economic rationale behind interest rates affecting stock prices. This link is one of the standardly stated transmission channels of the monetary policy and it has been widely analyzed and described e.g. from the monetary policy point of view.

The part I am the most concerned about is conclusions that are made based on the econometric results. The author applies the method rather mechanically using a time period which essentially covers one long-lasting rise in the Czech (and the world) economy and one long-lasting fall or slowdown. I would expect a simple anecdotic description of what was happening in the economy during that period, what was the behavior of studied time series and what might had caused that behavior. One of the main conclusions based on the different results of the model before 2008 and after 2008 is that the 2008 financial crisis in developed countries (and subsequent recession in 2009 in the Czech Republic) "...changed the underlying behavior of stock markets" (p.52). But this implication is wrong, because one will always get different results when applying a model on one series which is trending up and on the other series which is trending down. The results say nothing about whether the stock markets will behave differently during their next growth and their next fall. From the methodological point of view, the author should had tested for stationarity of the series in the two restricted time periods before and after 2008. Both oil and gold prices as well as the PX50 index were constantly rising from the beginning of the dataset until the "breakpoint". On the other hand interest rates have been falling since then. Also a simple chart with plotted main variables of our interest would reveal this issue and provide a reader a significant amount of information.

Minor issues:

- P.52: "Gradual growth in ... gold prices can be perceived as a consequence of increasing aggregate demand for production inputs and a healthy development of the world economy". No. Rise in gold prices between 2000 and mid-2011 can be perceived (to some extent) as a speculative bubble supported by a flight for safety after the 2008 turmoil.

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- P. 60: I don't see why stocks of ČEZ "... can be perceived as a substitute to bank deposits" anyhow more than the stocks of banking groups.
- Additional statistics are not included in table 4.3 (R^2 , number of observations...)
- Some variables are missing in Table 3.1
- Term $z_t \gamma$ in eq. 2.42 should be better described

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

CATEGORY	POINTS
<i>Literature</i> (max. 20 points)	15
<i>Methods</i> (max. 30 points)	18
<i>Contribution</i> (max. 30 points)	18
<i>Manuscript Form</i> (max. 20 points)	19
TOTAL POINTS (max. 100 points)	70
GRADE (1 – 2 – 3 – 4)	

NAME OF THE REFEREE: Josef Brechler

DATE OF EVALUATION: 19.6.2014

Referee Signature

EXPLANATION OF CATEGORIES AND SCALE:

LITERATURE REVIEW: *The thesis demonstrates author's full understanding and command of recent literature. The author quotes relevant literature in a proper way.*

Strong Average Weak
20 10 0

METHODS: *The tools used are relevant to the research question being investigated, and adequate to the author's level of studies. The thesis topic is comprehensively analyzed.*

Strong Average Weak
30 15 0

CONTRIBUTION: *The author presents original ideas on the topic demonstrating critical thinking and ability to draw conclusions based on the knowledge of relevant theory and empirics. There is a distinct value added of the thesis.*

Strong Average Weak
30 15 0

MANUSCRIPT FORM: *The thesis is well structured. The student uses appropriate language and style, including academic format for graphs and tables. The text effectively refers to graphs and tables and disposes with a complete bibliography.*

Strong Average Weak
20 10 0

Overall grading:

TOTAL POINTS	GRADE		
81 – 100	1	= excellent	= výborně
61 – 80	2	= good	= velmi dobře
41 – 60	3	= satisfactory	= dobře
0 – 40	4	= fail	= nedoporučuji k obhajobě