

Report on Bachelor / Master Thesis

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

Student:	Bc. Kristýna Brůnová
Advisor:	Prof. Roman Horváth, Ph.D.
Title of the thesis:	Monetary Policy and House Price in the USA: Evidence from Time-Varying VAR Model

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

The M.A. thesis of Kristyna Brunova focuses on empirical examination of monetary policy effect on housing prices in the US in 1999-2017. As I will argue below, Kristyna Brunova demonstrates an excellent knowledge of time series econometrics.

Contribution

The thesis focusing on examining the effect of monetary policy on house prices in the US. This topic has been already studied by some authors (eventhough given the importance of the question of to what extent monetary policy affects housing prices and asset prices in general), the topic is in my opinion still underresearched. The main contribution is an application of Bayesian time-varying parameter vector autoregression model with stochastic volatility and dynamic dimension selection. The part „dynamic dimension selection“ is the key novelty: the true data generating process is allowed to change over time. This feature is important when analyzing asset prices because the determinants of asset prices change over time. There are only handful of studies with dynamic dimension selection. In addition, the available code in Matlab provides only features allowing forecasting from the model. Kristyna programmed by herself an extension of this code allowing researcher to carry out impulse responses and forecast error variance decomposition. With this advanced econometric tool, Kristyna Brunova can examine how the link between monetary policy and house prices change over time – during the global financial crisis.

Methods

As partially explained above, Kristyna Brunova uses Bayesian time-varying parameter vector autoregression model with stochastic volatility and dynamic dimension selection. Therefore, it is a general model, which allows the linkages among variables, uncertainty and the number of variables in the model to change over time. This general „time-varying“ form is important when studying the link between monetary policy and asset prices.

A high number of robustness checks are carried out to examine whether the results are sensitive to the measurement of data, ordering of variables, number of variables.

Literature

The literature is covered very well and all important references are cited and properly discussed. I appreciate that main important studies are discussed in the detail.

Manuscript form

The manuscript form as well as organization of the thesis is standard. The thesis is written well and in general, very easy to follow for the reader.

Overall, I find this thesis as a great piece of applied but advanced econometric work oriented on highly relevant policy topic and therefore, recommend the grade A.

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

CATEGORY	POINTS
Contribution (max. 30 points)	29
Methods (max. 30 points)	30
Literature (max. 20 points)	20
Manuscript Form (max. 20 points)	19
TOTAL POINTS (max. 100 points)	98
GRADE (A – B – C – D – E – F)	A

NAME OF THE REFEREE: Prof. Roman Horváth, Ph.D.

DATE OF EVALUATION: January 7, 2018



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	GRADE
91 – 100	A
81 - 90	B
71 - 80	C
61 – 70	D
51 – 60	E
0 – 50	F