Opponent's Report on Dissertation Thesis

Institute of Economic Studies, Faculty of Social Sciences, Charles University in Prague
Opletalova 26, 110 00 Praha 1, Czech Republic
Phone: +420 222 112 330, Fax: +420 222 112 304

Author:	**Petr Gapko**
Advisor:	RNDr. Martin Šmíd, Ph. D.
Title of the Thesis:	Three Essays on Credit Risk Quantification
Type of Defense:	**DEFENSE**
Date of Pre-Defense:	April 16, 2014
Opponent:	**Prof. Rita Laura D'Ecclesia**

Address the following questions in your report, please:

a) Can you recognize an original contribution of the author?
b) Is the thesis based on relevant references?
c) Is the thesis defendable at your home institution?
d) Do the results of the thesis allow their publication in a respected economic journal?
e) Are there any additional major comments on what should be improved?
f) Were your comments raised at the pre-defense, addressed in the dissertation submitted to the regular defense? (The pre-defense report is enclosed below)
g) What is your overall assessment of the thesis? (a) I recommend the thesis to be defended without major changes; (b) The thesis is not defendable.

(Note: The report should be at least 2 pages long.)

Content of the Report:

The thesis aims to model and measure credit risk, using as starting point the Vasicek's model (2002) and introducing adequate assumptions.
The revised and complete version of the thesis has several original contributions. One is to make a realistic assumption on the non normality for one of the risk factor common to all borrowers in the portfolio. Thisis particularly suitable for the period he analyzes which shows high volatility of loan assets values.
A second contribution can be found in modeling each individual borrower risk factor using macroeconomic indicators.

To measure the loan portfolio credit risk the author builds an ad hoc model introducing some changes in the well known Vasicek's model. He calibrate the model on empirical data and stimates the parameters. The model seems to fit well the analyzed data providing support for the choice of the assumptions made.
The author extend his analysis to measure the default rate and the loss given default, he measures the LGD and tracks it to the behavior of the risk factors testing the model on a nationwide
portfolio of US mortgage delinquencies. The suggested model allows the author to provide more accurate estimation of the quantile loss.

Finally the author analyzes a loan portfolio assuming choices are driven by common and individual risk factors, he uses the Vector Error Correction Models framework to measures the relationship between the common factors, the loss given default and the percentage of defaults.

The entire thesis benefits of the results obtained by empirical application performed on a US mortgage delinquencies dataset.
The final version of the dissertation has incorporated the various comments and improvements suggested by the three referees.

In my opinion the candidate has done an excellent work providing original contributions in the adopted methodology and very interesting insights provided by the empirical findings.
Overall the thesis is written in good English and the presentation is clear and complete.
In my opinion the dissertation meets the international institution standards and can be defended for a PhD degree.

Date:	August 30th 2014
Opponent's Signature:	
Opponent's Affiliation:	Prof. Rita Laura D'Ecclesia University of Rome "La Sapienza", Italy