

Report on Master Thesis

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

Student:	Bc. Matěj Nevrla
Advisor:	PhDr. Jozef Baruník, Ph.D.
Title of the thesis:	Systemic Risk in the European Financial and Energy Sector: Dynamic Factor Copula Approach

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

The quality of the thesis is no doubt well above average diploma thesis at the IES. The author has proven advanced financial modelling skills and deep understanding of the probability theory and econometrics. The topic is interesting and up-to-date. Moreover, the fact that the author is able to apply very recent findings and literature is very attractive and it further amplifies very good impression of the thesis. The advanced level of the contents also points to an effective cooperation between the advisor and the student, which is often not the case in other theses.

The formal appearance of the thesis is very good. It is well structured and it contains all formalities required from a diploma thesis. If the author decides to publish part or parts of the thesis, he should go through the text and correct all typing errors or nonsense sentences.

Suggested topics for the defense:

- Application of copulas looks very nice but results in numerous **simplifying assumptions**. Otherwise the calculation would be very demanding or even impossible. The author should not only mention but also carefully discuss every simplification or assumption and its consequences on the results, supporting its arguments by existing literature (e.g. assumption of diagonal matrices on p. 24, identical pair-wise dependence or block equidependence on p. 26, constant risk free rate and default hazard rate on p. 28, fixed LGD and derivation of PD in equation 4.4., setting of the threshold level in eq. 5.1, limit in equation 5.2).
- Numerous literature in past years investigated the behaviour of CDS prices. It has been demonstrated that it does not consist only of the credit risk of the underlying asset as the author assumes. In addition, there is a credit risk of the “insurer” (usually a large bank). As a result, CDS buyer is willing to pay less for the protection. This perception of **CDS counterparty credit risk** increased with the world financial crisis. Author could consider this fact and think how it influences his results and how his calculation could be improved.

In case of successful defense, I recommend “**v ýborn ě**” (excellent, 1).

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

CATEGORY	POINTS
Literature (max. 20 points)	17
Methods (max. 30 points)	30
Contribution (max. 30 points)	28
Manuscript Form (max. 20 points)	20
TOTAL POINTS (max. 100 points)	95
GRADE (1 – 2 – 3 – 4)	1

NAME OF THE REFEREE: PhDr. Petra Buzková

DATE OF EVALUATION: 14.6.2016

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