

# Assessment of Master Thesis – Opponent



Study programme: **Economics of Globalisation and European Integration**

Field of study:

Academic year: **2014/2015**

Master Thesis Topic: **Investigating Risk-On Risk-Off Patterns in Global Financial Markets**

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Ac. Consultant's Name: **doc. Ing. Anna Klosová, CSc.**

Opponent: **Dr. Steven Vanduffel**

	Criterion	Mark (1–4)
1.	Overall objective achievement	<b>2</b>
2.	Logical structure	<b>2</b>
3.	Using of literature, citations	<b>3</b>
4.	Adequacy of methods used	<b>2</b>
5.	Depth of analysis	<b>2</b>
6.	Self-reliance of author	<b>1</b>
7.	Formal requirements: text, graphs, tables	<b>3</b>
8.	Language and stylistics	<b>2</b>

## Comments and Questions:

What are the data used exactly?

It is mentioned a few times that one is measuring correlation among assets. This is however meaningless as such. Does the author means that he is computing correlation between “values” or “returns” (i.e., changes in subsequent values of some underlying (e.g., some exchange rate, bond yields) and if so, which kind of return exactly?) or ....See also the quote from HSBC:

“correlations between financial asset returns have intensified since the onset of the credit crisis and nearly all assets are now driven by a single, binary recovery factor. The market either believes that we are on the road to recovery – risk on; or that we are not – risk off” (HSBC, 2010, str. 2).

The author measures dependence among asset (return)s and makes use of Pearson correlation to do so.

The use of linear Pearson correlation is ok provided the returns are multivariate normally distributed (MVN). The same holds true for the use of the linear regression. Weekly return data typically do not exhibit MVN. A discussion on this important aspect is completely missing. E.g., by doing some standard tests to check MVN. Mentioning that the correlation used measures only linear relationship is not enough. To illustrate the importance of the MVN, let  $X$  be normally distributed then the Pearson correlation between  $X$  and  $4X$  is +1. However, the correlation between  $\exp(X)$  and  $\exp(5X)$  is nearly zero. The author does not discuss other approaches to measure dependence. There is a rich literature on inferring dependence using option data. The nice feature of such approach is that the ‘correlations’ are forward looking. It would have been interesting to compare the results of such approach (even on a toy model) with the results of the present work (historical analysis).

**Conclusion: The Master Thesis is recommended for the defence.**

Suggested Grade:     **2**

Date: 06. 01. 2015

**Dr. Steven Vanduffel**  
Opponent