

# Report on Bachelor / Master Thesis

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

<b>Student:</b>	<b>Michal Spišiak</b>
<b>Advisor:</b>	<b>doc. PhDr. Petr Teplý, Ph.D.</b>
<b>Title of the thesis:</b>	<b>Assessment of cyber risk in the banking industry</b>

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

*Please provide your assessment of each of the following four categories. The minimum length of the report is 300 words.*

### **Contribution**

The goal of the thesis is to analyze and quantify the danger of cyber risk for financial institutions, especially banks. Author argues that the potential losses might be liquidating for the institution under attack and that the cyber risk are often underestimated. He attempts to provide few recommendations about how to improve the risk management of the banks. He claims that the data set he uses (taken from Gemalto (2017) who collects all the publicly announced data breaches) has never been used for the purpose of calculating the cost of data breaches before. For this reason, he provides new insights on the value of costs coming from the cyber risks.

### **Methods**

Author demonstrates that he got familiar with basic concepts of statistics. He estimates the VaR and CVaR on the series of the data breaches coming from the cyber attacks. The value of VaR or CVaR (which is expressed in the number of records lost) crucially depends on the distributional assumption of the severity of breaches (number of records lost in the data breach). Author tries several distributions to check the sensitivity of his result to the distributional assumptions. He provides detailed description of each distribution. It is not obvious from the thesis if he used some software (predefined function) to calculate VaR or he coded up the calculations by himself.

### **Literature**

Author provides nice literature review summarizing the definition and calculation of the cyber risk. He provides short history review of most famous cyber attacks. To sum up, he demonstrates that he got familiar with the related literature

### **Manuscript form**

The thesis is written in rather loose form. The contribution is often overvalued and stressed by adjectives which are not suitable for academic text. Also, the structure of introduction does not follow the recommendation of academic writing handbooks. Section conclusion is actually new chapter comparing authors results with the results found elsewhere in the literature and evaluating the VaR and CVaR in US dollars. Page numbering is missing in the thesis so prints out are sometimes difficult to read.

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

<b>CATEGORY</b>	<b>POINTS</b>
<i>Contribution</i> (max. 30 points)	30
<i>Methods</i> (max. 30 points)	20
<i>Literature</i> (max. 20 points)	20
<i>Manuscript Form</i> (max. 20 points)	10
<b>TOTAL POINTS</b> (max. 100 points)	<b>80</b>
<b>GRADE</b> (1 – 2 – 3 – 4)	<b>2</b>

**NAME OF THE REFEREE:** *Aleš Maršál*

**DATE OF EVALUATION:** 5.6.2017

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**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	<b>1</b>	= excellent	= výborně
61 – 80	<b>2</b>	= good	= velmi dobře
41 – 60	<b>3</b>	= satisfactory	= dobře
0 – 40	<b>4</b>	= fail	= nedoporučuji k obhajobě