

# Report on Bachelor / Master Thesis

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

<b>Student:</b>	<b>Bc. Michal Polena</b>
<b>Advisor:</b>	<b>Doc. PhDr. Petr Teplý, Ph.D.</b>
<b>Title of the thesis:</b>	<b>Performance Analysis of Credit Scoring Models on Lending Club Data</b>

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

**Contribution** – generally I think the master's thesis is excellent, well structured, sourced and well reasoned. Although theoretic in its main body, we can draw some practical implications from it. The student compares ten classification algorithms for credit scoring, subsequently their prediction performances are measured by six different classification performance measures. The sample analysed is the portfolio of more than 200 thousand deals, where the lender is the biggest P2P US lender – The Lending Club.

Although the student applied a rather sophisticated approach, the results are these, that the commonly used logistic regression and linear discriminant analysis are in the end the best predictors of credit quality. And actually are - at the same time - the banking standard all over the world, also in the Czech Republic. So the final conclusion is, that using sophisticated apparatus, the student arrived at the models that are standardly used. Surely it would be a big surprise if other models revealed their superiority, as the banks are backtesting their models continuously. That is why I do not give the full score for Contribution.

**Methods** – I can not identify any shortcomings in methods used, all parameters (variables) for scoring as well as theories applied were well sourced and described. I very much appreciate the size of the sample and I agree with the student, that the size is really unique. The sample was properly identified and analyzed. The range of the models was very wide. Application of the model was appropriate.

**Literature** – I can not identify any shortcomings in student's work with literature, the literature used was up-to-date and well sourced.

**Manuscript form** – I can not find any shortcomings in the manuscript form, the level of (English) language is very high. The structure of the text follows logic, the orientation is easy. The student adheres to academic format for graphs, tables, references.

If the student is going to discuss the thesis during the defense, I ask him if he has information on P2P lending in the Czech Republic, the size of the market, number of transactions, furthermore if he is aware of the scoring methods the Czech providers use.

The Master's thesis presented by Michal Polena demonstrates high quality in all categories, that is why I assess his Master's thesis very positive and grade it with **1 - excellent**.

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

<b>CATEGORY</b>	<b>POINTS</b>
<i>Contribution</i> (max. 30 points)	25
<i>Methods</i> (max. 30 points)	30
<i>Literature</i> (max. 20 points)	20
<i>Manuscript Form</i> (max. 20 points)	20
<b>TOTAL POINTS</b> (max. 100 points)	<b>95</b>
<b>GRADE</b> (1 – 2 – 3 – 4)	<b>1</b>

**NAME OF THE REFEREE:** *Mgr. Magda Pečená, Ph.D.*

**DATE OF EVALUATION:**

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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