

Report on Master Thesis

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

Student:	Robert Verner
Advisor:	Jozef Barunik
Title of the thesis:	Stock Markets Analysis Using New Genetic Annealed Neural Network

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

Presented work introduces the new algorithm for analyzing stock markets. Author develops his own hybrid neural network based on genetic algorithms and simulated annealing. The field of genetic algorithms in optimization problems is fast growing and promising and it is very interesting to apply it to the financial modeling. The thesis is original, author proved strong quantitative skills during the work as he was able not only to manage the advanced methodology but develop his own new algorithm.

Structure of the thesis is logical, maybe it would benefit from being shortened as some parts introducing the standard tools may be superfluous for this kind of the text. Still, it gives the reader the value even in the cost of its length. I have to note that Robert worked very independently while developing the algorithm, and finally incorporated most of my comments so I have no additional questions to the defence. In the application, Robert uses his algorithm, in comparison to other standard methods, to analyze the stock market behavior. I think the most important application one would like to see is forecasting behavior of the algorithm, so I would suggest Robert to include forecasting exercise in his future work. This is the only point where I would see possible enhancement of the work.

In conclusion, I fully recommend the diploma thesis of Robert Verner for the defence with final grade **excellent** ("výborně" - 1).

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

CATEGORY	POINTS
<i>Literature</i> (max. 20 points)	20
<i>Methods</i> (max. 30 points)	27
<i>Contribution</i> (max. 30 points)	26
<i>Manuscript Form</i> (max. 20 points)	18
TOTAL POINTS (max. 100 points)	91
GRADE (1 – 2 – 3 – 4)	1

NAME OF THE REFEREE: Jozef Barunik

DATE OF EVALUATION: 12.6.2011

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