Report on **Bachelor / Master Thesis**

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

Student:	**Daniel Vach**
Advisor:	**Aleš Maršál**
Title of the thesis:	**Comparison of double auction bidding strategies for automated trading agents**

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

The goal of the thesis is to compare several automated bidding strategies using the OpEx toolkit. In the next step author designs his own strategy. Each strategy is represented by the group of automated bidding traders. Traders' performance is compared based on their trading surplus which is the margin above/under the equilibrium price depending if the trader is seller or buyer. The idea is to create large number of trading days with varying proportions of trading strategies. The group of traders with the highest sum of trading surpluses represents the most efficient trading strategy. The novelty of the thesis lies in the assumption about the population density. Author tries combinations and proportions of traders which were not tested in the literature before.

Daniel demonstrates that he can read and understand related literature. He managed to get familiar with OpEx environment. In addition, he had to go through a bit of his own programing in C# to implement the new strategy. In my opinion, the thesis misses closer link to the continuous double auction theory or to the game theoretical framework. The purpose of the thesis in the current form is not absolutely clear to me. Finding outperforming strategy able to generate positive return should help to design better properties of CDA? Or the purpose is to find excess return on the market? The simulated environment substantially differs from the real markets (mainly by the fact that traders know the equilibrium price) so even finding the best strategy does not imply profit on the real market. Although author's contribution to the literature is rather moderate the thesis creates good platform for future research.

In case of successful defense I recommend excellent.

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

CATEGORY		POINTS
Literature	*(max. 20 points)*	20
Methods	*(max. 30 points)*	26
Contribution	*(max. 30 points)*	28
Manuscript Form	*(max. 20 points)*	16
TOTAL POINTS	*(max. 100 points)*	**90**
GRADE	**(1 – 2 – 3 – 4)**	**1**

NAME OF THE REFEREE:

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