Philosophical Faculty Palacký University Olomouc

Department of Applied Economics

FINAL THESIS REVIEW

Thesis type: **Bachelor**

Student (name and surname): **Tomáš Novák**
Opponent: **Mgr. Tomáš Talášek**
The topic of the final thesis: **Algorithmic trading strategies focussed on currencies**

1. Difficulty of the thesis in:

Theoretical knowledge	**standard**	~~high~~
Input data and its elaboration	**standard**	~~high~~
Applied methods	~~standard~~	**high**

2. Evaluation of the thesis:

Criterion	Evaluation grade (acc. to SC UP)					
	A	**B**	**C**	**D**	**E**	**F**
Level of reaching the thesis goal(s)			X			
Logical construction of the thesis			X			
Amount of student's own contribution in comparison to the amount of taken information			X			
Suitability of applied methods		X				
Work with resources including citations						X
Layout of the thesis (text, graphs, tables)				X		
Stylistic level, grammaticality			X			
Applicability of the thesis conclusions in practice				X		

3. Questions to answer during the defence (eventually remarks of the opponent):

The thesis focuses on algorithmic trading strategies in the context of currencies. The main goal (that is not explicitly stated) is to implement the automated process for backtesting on a historical data in MS Excel and test three algorithmic strategies on this data. The results will be then compared with buy and hold strategy that will serve as universal benchmark.

Firstly, the thesis is hard to read due to the following: 1) English is mediocre and text contains high amount of typos (e.g. page 11 world wild -> world wide; page 23: excution, tradins; page 33: cumputed, overbouught; page 34: construsted...). The text definitely deserves proofreading. 2) References are insufficient – several citation styles are used at once. Also, literature is not ordered

by the names of authors, title nor the appearance in the text. This makes any attempt to find the cited source very challenging. Moreover some cited publications are not in the references (e.g. page 15: Michael D. Archer, 2008; page 17: Chen, Kaiji, Imrohoroglu, 2006). 3) Author uses comma as a decimal separator, 4) captions of figures are short and not self-supporting. Basically it looks like the thesis was written in a hurry.

Theoretical part consists of 3 chapters. First chapter is focused on FOREX. Unfortunately, author uses several terms, which are not explained, but are critical for the understanding of the thesis (e.g. trading bots, short and long position, put/call option, volatility…). Also, some statements are contradictory – for example on page 12 is stated "Forex market is open 24 hours a day", but in the first sentence of chapter 2 is stated "Currencies are traded on forex market 24h a day, that is only closed from friday evening to sunday evening". Second chapter is called currencies and it focuses mostly on major currency pairs. Author states there, that he will only consider EUR/USD and USD/JPY pairs in the thesis. Unfortunately, this restriction is not justified. The last chapter of theoretical part is about algorithmic trading and author explains its advantages and disadvantages.

In the practical part author introduces several indicators, which are organized into groups and commented. Mathematical formulas are unfortunately not ideal and would deserve proper explanations. Also, I am missing some practical example of each indicator where is explained how it can be used for generating buy/sell signals – that would be very convenient. Moreover, author chose three of these indicators for the implementation in the Excel – however, the selection is again not justified.

In the final part, author proposed three strategies (based on the selected indicators) and backtested them on historical data (from December 2017 to April 2019, again there were no explanation why he pick this interval) for both currency pairs (EUR/USD and USD/JPY). The results for each strategy are presented in the tables (together with excel screenshots) and commented. Unfortunately, and this is the biggest problem of the thesis, the overall comparison of strategies is not included – author just briefly states in the conclusion, that the best strategy was CMF. Also, the promised comparison with universal benchmark is only briefly stated in the conclusion.

I have the following questions:
1) Why did you decide to focus on EUR/USD and USD/JPY pairs in the thesis?
2) Can you explain what a one pip is? From the thesis it is not understandable.
3) On page 23 (last paragraph) is stated: "Traders do not have to spend a lot of time monitoring the markets, as trades can be executed without continuous supervision". Is it reasonable to skip the supervision?
4) You have decided to use three strategies based on CMF, EMA and Stochastic Oscillator – why did you pick these three indicators?
5) You said, that the CMF is the best strategy – is it reasonable to invest your, if the used strategy for buy/sell signals is based solely on CMF?

4. The thesis **is** recommended for the defence.

5. Suggested classification grade: **E**

Place and date   Signature of the opponent