



University of Economics, Prague

Faculty of Finance and Accounting
Study programme "Finance and Accounting"

Master Thesis Evaluation

Please select

Student name: *Iveta Karpišová*

Title of the thesis: *Comparison of Warrant Pricing Models*

Year of the defence: *2020*

**Supervisor name
and affiliation:** *prof. Jiri Witzany, University of Economics, Prague*

**Reviewer name
and affiliation:** *Oleg Kravtsov, MBA, PhD Finalist, University of Economics,
Prague*

THESIS CONTENT SUMMARY:

This thesis deals with a topic of evaluation of pricing methods of warrants. There are four models presented and evaluated in this study, namely: Black-Scholes (BS), diluted BS, Galai-Schneller and Ukhov model. The results of four models are cross-examined and compared to the actual quoted prices. In empirical part, the performance of models has been tested on the basis of the time series data of 14 warrants quoted on the Hong Kong Exchange. In summary, it is concluded that Galai-Schneller model with implied volatility outperforms the competing ones.

OBJECTIONS AND REMARKS:

I do not have any serious objections to this thesis. The thesis is well structured, well written (with minor stylistic issues) and overall coherent. The author has utilized a substantial amount of academic resources for the theoretical part and implemented them well empirically. The author showed a substantial effort in testing the models with the application of advanced technical tools (RStudio). The conclusions based on the empirical study are coherent and provide a potential discussion for future research.

One minor remark/question to the author reg. the literature, if there are any other similar and recent empirical research done with a focus on the pricing of warrants in Asian, EU markets? Or in comparison to alternative models with a local stochastic and jump features of volatility dynamics e.g. Constant Elasticity of Variance model, jump-diffusion model? However, noting the overall scarcity of the empirical literature on the topic, it is a minor issue.

I find this thesis very well prepared and recommend for defence.

QUESTIONS FOR THE DEFENCE:

1. How the time-frame and gearing of traded warrants can affect the performance of the discussed pricing models?
2. The models of GARCH family can be considered to be consistent with the different levels of market-efficiencies (Fama 1970). In our opinion, what do the results of this study say about the market efficiency level?


ASSESSMENT:

Criterion	Excellent	Very good	Good	Insufficient
Aim formulation and fulfilment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Work with literature	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Methods and data used	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Results and their discussion	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Formal aspects	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Proposed overall grading: 5 - Excellent

Vienna, February 5th , 2020

Oleg Kravtsov



Signature