## REFEREE'S REVIEW

Program:	Master in Corporate Finance
Student:	Sergei Vasilev
Title of thesis:	Investment decision making in real estate industry with Real Options Analysis: case of RBI Holding

Justification of the topic choice. Accuracy in defining the aim and objectives of the thesis. Justification of the topic choice; accuracy in defining the aim and tasks of the thesis; originality of the topic and the extent to which it was covered; alignment of the thesis' topic, aim and	5		
objectives.			
Structure and logic of the text flow. Logic of research; full scope of the thesis; alignment of thesis' structural parts, i.e. theoretical and empirical parts.	5		
Quality of analytical approach and quality of offered solution to the research	•		
objectives. Adequacy of objectives coverage; ability to formulate and convey the research problem; ability to offer options for its solution; application of the latest trends in relevant research are for the set objectives.		4	
Quality of data gathering and description. Quality of selecting research tools and methods; data validity adequacy; adequacy of used data for chosen research tools and methods; completeness and relevance of the list of references.		4	
Scientific aspect of the thesis. Independent scientific thinking in solving the set problem/objectives; the extent to which the student contributed to selecting and justifying the research model (conceptual and/or quantitative), developing methodology/approach to set objectives.		4	
Practical/applied nature of research. Extent to which the theoretical background is related to the international or Russian managerial practice; development of applied recommendations; justification and interpretation of the empirical/applied results.			
Quality of thesis layout. Layout fulfils the requirements of the Regulations for master thesis preparation and defense, correct layout of tables, figures, references.			

Each item above is evaluated on the following scale, as applicable: 5 = the thesis meets all the requirements, 4 = the thesis meets almost all the requirements, 3 = a lot of the requirements are not met in the thesis, 2 = the thesis does not meet the requirements.

## Additional comments:

Thesis treats a classical area of application of Real Options Analysis (ROA) to the real estate valuation and decisions. It has a form of a consulting project on vacant land valuation with realistic data. The author provides appropriate descriptions of classical real options (RO) used in this area. The technique applied is based on well-known non-arbitrage single period model, which is expanded to many periods. Main idea of ROA is to estimate additional value, which comes from managerial flexibility in decision making, due to uncertainty in economic parameters. The only source of uncertainty is taken into account here is price uncertainty (for different types of real estate).

Author provides a good survey of the industry and the company under investigation. The land utilization is sufficiently complex. It includes residential housing as well as two types of non-residential real estate with clear implications to the construction of cash flows. The author completely achieved his goal of investment project appraisal.

Practical importance of such studies, which are very rare in Russia, is not disputable. Design is logical and layout is good.

Nevertheless there are some weak points in the thesis. First of all, evaluation technique is basic and now is included in the majority of texts on corporate finance. There are many applied journal publications on real estate, which were not either used or mentioned. So it is not at a frontier. Second, the choice of risk-free rate at page 65 based at industrial level is wrong since it completely destroys the logic of non-arbitrage model in use. It is possible in traditional NPV analysis but it does not work in ROA. Third, even the model presented

might be interpreted more interestingly if to include, for example, analysis of the choice of proportions between different types of real estate located at the projected piece of land.

Master thesis of Sergei Vasilev meets the requirements of MCF program, and according to the reviewer's opinion deserves an "excellent" grade (ECTS grade is B), thus the author can be given the desired degree.

a Bulhall

Date: June 12, 2015

Referee: Professor Alexander Bukhvalov