

REFEREE'S REVIEW

Program:	Master in Corporate Finance
Student:	Pavel Maslennikov
Title of thesis:	Real options for investment analysis of biotechnological start-ups: The case of North-West Technology Transfer Center portfolio company

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 objectives.	5	4	3	2
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	4	3	2
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.	5	4	3	2
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.	5	4	3	2
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.	5	4	3	2
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.	5	4	3	2
Quality of thesis layout. Layout fulfils the requirements of the Regulations for master thesis preparation and defense, correct layout of tables, figures, references.	5	4	3	2

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:

The thesis under review represents a practical implementation of real option valuation techniques to a specific biotechnological project. First chapter covers biotech industry description, identifies its specific risks and flexibilities, also covering real option concept and its application to the above industry analysis. Suggested analysis present a good overview of existing approaches, discusses their application to the chosen industry and project.

Second chapter focuses on existing valuation methodologies, applicable to projects with embedded flexibility. While being thorough and accurate, it represents a good example of existing tools description and brings nothing new to already established and well recognized valuation techniques.

The third section focuses on valuation of specific project, developed within Rusnano Group. Practical implementation of the discussed methodologies is thorough and accurate, representing a good example of theoretical concepts being applied to investment analysis. However in one instance deeper discussion of the results would be advisable: Binomial tree valuation gave a much higher project value than real options analysis. Based on author's assumption about each method, the latter should give more accurate value due to incorporation of all kinds of real options into valuation (versus only option to abandon) and of continuous cash flow (vs. discreet ones). In this case it would be interesting to discuss, which part of difference in value comes from additional flexibility valuation, and which – from taking continuous cash flow into account. Intuitively one might expect different result, and project characteristics seem to play essential role in the presented outcome (usually an option brings additional value to the project, and incorporation of continuous cash flow should also increase it, but this case is different). Otherwise the analysis is complete and well structured.

The layout meets requirements of the Regulations for master thesis preparation and defense, text is well structured, reader-friendly and clear.

Master thesis of Pavel Maslennikov meets the requirements of master in Corporate Finance program, and according to the reviewer's opinion deserves an "excellent" grade (ECTS grade B), thus the author can be given the desired degree.

Date 2nd June 2016



Referee:

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