SCIENTIFIC ADVISOR'S REFERENCE

| Program: | MCF |
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| Student: | Reztsov Vladimir |
| Title of thesis: | Real options as a tool for risk management in artic shelf oil and gas projects: Rosneft case. |

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.

Projects in oil and gas industry are highly influenced by recent sanctions, especially arctic shelf. The main goal of Reztsov Vladimir's paper is to develop recommendations of strategies for risk management for such projects. Achievement of the main goal required the consecutive solutions of research objectives related to the methods of risk management. A significant part of the paper focuses on the analysis of the risks for oil and gas projects and real option approach as a tool for managing these risks.

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.

The structure of the thesis is logical and intended to the solution of objectives stated. The introduction describes the issue of the thesis and the relevance of research, the main goal and objectives. The first and third chapters are theoretical. The author provides the analysis of methods of risk management and different real option valuation techniques as long as detailed description of the chosen methodology with all the necessary assumptions. The second chapter presents the analysis of oil and gas industry with the identification of risks for current projects. The last chapter provides two case studies of Rosneft arctic shelf projects with further discussion of managerial implications of the results and the methodology.

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.

All tasks of the study are fully resolved. Methodology is in line with what is described in the academic literature. Literature review related with the paper topic, the study conducted and the findings derived demonstrate good analytical skills of the author. Overall, the quality of the analytical approach can be regarded as high.

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.

The data is relevant. The methodology and analysis methods are adequate for the conducted research. The list of references is relevant and contains recent papers as well as classical ones devoted to the issue under investigation.

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.

The author used existing methodology and justified it with assumptions and simulation in order to be valuable for particular type of oil and gas projects. Taking into account that there are no similar studies on arctic shelf projects, the paper has originality and practical value.

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.

Real option approach has been first used for arctic shelf oil and gas projects. The results of the study enabled to formulate the number of practical managerial implications.

The advantage of the study is also justification of the model, which makes it more applicable for different types of projects.

Quality of thesis layout. Layout fulfils the requirements of the Regulations for master thesis preparation and defence, correct layout of tables, figures, and references.

The layout of the thesis meets the requirements for master thesis preparation.

The Master thesis of Vladimir Reztsov meets the requirements for master thesis of MCF program thus the author of the thesis can be awarded the required degree.

Oht

Date 10.06.2015

Scientific Advisor: Associate Professor Anna E. Loukianova