Federal state autonomous educational institution for higher professional education

National Research University Higher School of Economics

International Collage of Economics and Finance

**REFEREE’S REPORT**

**On Bachelor Diploma Paper**

ICEF Student’s name\_\_ Vetrov, Alexey\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Referee \_\_\_\_\_Boulatov Alexei, PhD, Professor\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(name, academic degree, academic rank)

Topic \_\_\_ Analysis of Informational Efficiency of Russian Bond Market Via Conventional Models and Neural Networks

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| --- | --- | --- |
| No | **Components** | **Grade (10-point scale)** |
| 1. | Meaningful research statement, correspondence of paper's content to its title | 9 |
| 2. | Originality of research, independence of student’s work | 8 |
| 3. | Quality and completeness of literature review. | 8 |
| 4. | Quality of theoretical and/or empirical analysis, its correspondence to the methodology of contemporary economics research | 8 |
| 5. | Correct typesetting of references, sections, equations, figures, tables, bibliography | 9 |
|  | RECOMMENDED FINAL GRADE  (not necessarily the average of the above) | 9 |

Recommendation on acceptance for defense: \_\_\_\_\_\_\_accept\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Commentaries: The Diploma paper analyzes the Efficient Market Hypothesis (EMH) using the data from the Russian corporate bond market. Essentially, the paper proposes to compare the performance of the standard autoregressive models and non-linear sequential connectionist systems, known as recurrent neural networks.

Alexey showed that the proposed LSTM neural network did better in a static setting, in the rolling case it failed to outperform the ARIMA model. Some additional tests confirm that the standard models give a reasonable representation of the data. I think this requires some additional analysis and explanations.

Regardless the specific model, the author concludes that the weak-form efficiency hypothesis for Russian corporate bond market has to be rejected, which could be an interesting result by itself.

I think that the issue described above could be a subject of further research.

Overall, I think that Alexey did a very good job for his Bachelor Thesis. In my view, the paper deserves a grade of 8-9 or higher conditional on a successful defense.

Date:\_\_\_\_\_\_\_\_\_\_\_June 18, 2019\_\_

Referee’s name Alexei Boulatov Signature