НОВ БЪЛГАРСКИ УНИВЕРСИТЕТ

Appendix 4 to the Regulations for the Development of the Academic Staff of NBU

OPINION

by

Assoc. Prof. Dr. Emil Serafimov Kalchev, New Bulgarian University, Professional Field 3.8 Economics on a dissertation submitted for the award of the educational and scientific degree "**Doctor**" in professional Field 3.8 Economics, entitled "**Problems in the Valuation of the Fair Value of Public Companies and Enhancing Its Substantiation**", with author **Stefanie Georgieva Andreeva** (Candidate)

Supervisor: Prof. Dr. Reneta Marinova Dimitrova

1. Significance of the Research Problem in Scientific and Applied Terms

The problem of valuing the fair value of public companies under conditions of high uncertainty is of unquestionable scientific and practical significance. It is particularly relevant in view of the increasing share of emerging companies, the rapidly evolving regulatory changes in capital markets, and the development of digital technologies, which place traditional valuation approaches under considerable pressure.

From a scientific perspective, the dissertation falls within the field of applied corporate finance, with a specific focus on business valuation. Given that valuation standards constitute an intersection between corporate finance, accounting, and professional appraisal practice, the research demonstrates a clear interdisciplinary character.

2. Substantiation of the Objectives and Research Tasks

The integration of Monte Carlo simulations into DCF models has been known in both theory and practice since the second half of the twentieth century. Since then, numerous studies and publications have addressed the topic, albeit not to the same extent as in other areas of corporate finance. The knowledge regarding the integration of Monte Carlo simulations into DCF models exists; however, it remains relatively fragmented and often case-based in nature. In practice, there is a lack of a widely established, systematized, and standardized methodological framework in this direction.

In this context, the objective of the dissertation is clearly defined, logically coherent, and directly derived from the outlined research problem. The orientation towards developing a systematic methodological framework, integrating Monte Carlo simulation into DCF models through clearly defined steps, is fully justified, firstly, in view of the limitations of the so-called traditional models under conditions of high endogenous and exogenous uncertainty, and secondly, considering the dispersed nature of the existing analyses in the literature.

The formulated research tasks are consistent, interrelated, and appropriate to the stated objective. They encompass both the theoretical foundations of the concept of "fair value" and its evolution within the regulatory framework, as well as the analysis of existing valuation models, the identification of their

limitations, and the development and empirical testing of a systematized methodological framework. The logic of the research clearly progresses from theoretical synthesis to methodological development and empirical validation.

At the same time, valuation standards allow the use of Monte Carlo simulations, provided that they are properly justified and consistently applied, which further substantiates the objective of the dissertation.

3. Correspondence Between the Selected Methodology and the Research Objectives and Tasks

The selected methodology and the specific research approach of the dissertation are appropriately aligned with the stated objective. The research logic consistently progresses from an analysis of economic theories of value and the existing accounting and valuation standards related to this concept, to the identification of their limitations and their overcoming through a systematic simulation-based methodological framework aimed at incorporating risk into valuation.

The proposed methodology is clearly structured through sequential stages—identification of materially significant variables, selection of probability distributions, treatment of correlation dependencies, Monte Carlo simulation, and analysis of results—which ensures internal consistency and applicability.

The empirical testing through application to two companies from different industries further confirms the consistency between the research methodology and the stated objective and tasks, demonstrating the applicability of the proposed approach in a real-world environment.

4. Scientific and Applied Contributions of the Dissertation

The dissertation contains clearly identifiable scientific and applied contributions. The most significant among them is the development of a structured, step-by-step methodological framework (a consistent procedure) for integrating Monte Carlo simulations into DCF models. The author enhances the practical applicability of existing approaches to risk modelling in the valuation of publicly traded companies.

The proposed systematization in the selection of probability distributions for the variables in the model, as well as the successful empirical testing of the methodological framework on real companies, should also be positively assessed, as they demonstrate its applicability.

It is also important to acknowledge the contributory aspect related to the well-established concept of "fair value"—not as a single point estimate, but as a range—through its methodological reinterpretation and practical operationalization within a probabilistic model.

5. Evaluation of Publications Related to the Dissertation

The submitted publications are related to the topic of the dissertation. They are sufficient in volume and meet the requirements for the award of the educational and scientific degree "Doctor". They cover key aspects of the research, including methodological issues, risks in valuation, and contemporary trends in financial analysis.

The publications are primarily included in conference proceedings and university editions, which is appropriate for the doctoral stage. Thematically, they are aligned with the dissertation and demonstrate consistency in the author's research interests.

A positive aspect is the relevance of the examined problems and the effort to link theoretical propositions with practical challenges. At the same time, it is recommended that, in future research activity, the results be published in peer-reviewed international academic journals, which would enhance their broader scientific visibility.

Overall, the publication activity is sufficient and adequately reflects the core ideas and results of the dissertation.

6. Opinions, Recommendations and Remarks

The stated objectives and tasks of the dissertation have been achieved. The research thesis has been successfully demonstrated. The dissertation represents an extensive, logically substantiated, and актуал research study, fully meeting the established requirements.

As a limitation of the study, it should be noted that the model remains dependent on expert assumptions—while more structured, the subjective element is not fully eliminated. The reliability of the results is a function of the selection of input variables, the parameterization and the form of the probability distributions, as well as the appropriate modelling of the correlation dependencies between them. At the same time, the empirical testing based on only two companies does not allow for broader generalization of the results.

A logical recommendation would be to perform robustness checks and out-of-sample validation in order to enhance the reliability and generalizability of the obtained results, which the author could pursue in future research.

7. Conclusion

The submitted dissertation, *"Problems in the Valuation of the Fair Value of Public Companies and Enhancing Its Substantiation"*, authored by PhD Candidate Stefanie Georgieva Andreeva, represents a completed scientific study with clearly defined objectives, an appropriate methodology, and significant scientific results. The dissertation meets the requirements for awarding the educational and scientific degree "Doctor" in Professional Field 3.8 Economics.

On the basis of the above, I give a positive evaluation and recommend that the Scientific Jury award Stefanie Georgieva Andreeva the educational and scientific degree "Doctor".

Date: 06 June 2026
Sofia

Signature: .....
/Assoc. Prof. Dr. Emil Kalchev/