REVIEW
of a PhD thesis entitled "Problems in the Valuation of the Fair Value of Public Companies and Guidelines for Enhancing Its Reliability"
by PhD candidate Stefani Georgieva Andreeva,
New Bulgarian University

Prepared by Prof. Stoyan Prodanov, PhD
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Dear colleagues,

The dissertation submitted by PhD candidate Stefani Georgieva Andreeva is entitled "Problems in the Valuation of the Fair Value of Public Companies and Guidelines for Enhancing Its Reliability". The present review has been prepared in accordance with the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria, its implementing regulations, and the Ordinance on Academic Staff Development of New Bulgarian University.

1. General information about the PhD candidate

PhD candidate Stefani Georgieva Andreeva possesses a profound and interdisciplinary academic background combining knowledge in the fields of law and finance. After completing her secondary education at the Foreign Language High School "Nikola Yonkov Vaptsarov" in Shumen, she continued her studies in Germany and subsequently obtained Master's degrees in Law and Finance from New Bulgarian University.

Her professional experience is closely related to the subject matter of the dissertation. As an Audit Assistant at RSM Bulgaria, she has worked in the field of financial analysis and corporate reporting, while her activity as an author of analytical publications on the international investment platform Seeking Alpha is

directly connected with the valuation of publicly traded companies and investment analysis.

In my opinion, the candidate's academic preparation and practical experience provide an excellent foundation for conducting research characterised by such a degree of methodological complexity and practical relevance.

2. General presentation of the dissertation, assessment of its format and structure

The dissertation comprises 231 pages and contains 54 tables and 22 figures. The bibliography includes 91 academic sources and scientific publications, 24 internet sources, 21 regulatory documents, and 15 specialised sources of financial data. The structure consists of an introduction, three chapters, a conclusion, and a bibliography. The exposition is logically consistent and internally balanced. A proper proportion has been achieved between the theoretical, methodological, and empirical parts of the research.

The topic is undoubtedly relevant. In recent years, the issue of fair value measurement has gained increasing importance both in financial theory and investment practice. The development of capital markets, the growing share of high-technology companies, and the heightened uncertainty of the economic environment have raised questions regarding the applicability of certain traditional valuation models and created a need for the improvement of the existing methodological framework. The central research problem is clearly formulated and focuses on enhancing the reliability of valuations based on the Discounted Cash Flow (DCF) method through the integration of probabilistic approaches for modelling uncertainty.

The structure of the dissertation is logically coherent and fully consistent with the research objectives and tasks. The exposition follows a classical scientific framework, beginning with the theoretical conceptualisation of the problem, proceeding through the development of a methodological solution, and culminating in its empirical application and validation.

Chapter One is devoted to the theoretical foundations of the concept of value and the evolution of fair value within contemporary financial theory and accounting practice. The author traces the development of various theoretical approaches to value and successfully establishes a connection between classical concepts and modern regulatory standards. Particular attention is devoted to the comparative analysis of IFRS 13 and ASC 820, which goes beyond a purely descriptive presentation and demonstrates a critical perspective on the existing regulatory solutions. The first chapter successfully fulfils its role as the theoretical foundation of the research and demonstrates a very good understanding of the current state of scientific debate on the subject.

Chapter Two provides the methodological core of the dissertation. The author systematically identifies the limitations of the traditional Discounted Cash Flow method and convincingly argues for the introduction of a probabilistic approach to modelling key input variables. The developed methodology for integrating Monte Carlo simulations through the specialised Oracle Crystal Ball software into DCF valuation is presented in a structured and reproducible manner, allowing both theoretical understanding and practical application. In my view, this chapter contains the most significant scientific and methodological contribution of the dissertation.

Chapter Three has a clearly expressed empirical and applied character. Through the application of the proposed model to real publicly traded companies, the author demonstrates its usefulness under conditions of significant market uncertainty and limited predictability of future cash flows. The selection of Rivian Automotive and Vera Therapeutics is well justified and enables the formulation of practically relevant conclusions regarding the advantages of the simulation-based approach compared to traditional valuation models. The analysis is detailed, and the interpretation of the results demonstrates the author's ability to combine quantitative methods with sound financial and economic reasoning.

Overall, the structure of the dissertation is well balanced. The individual chapters are logically interconnected and progressively develop the

argumentation supporting the research thesis. A proper balance has been achieved between the theoretical, methodological, and empirical components, resulting in a coherent and comprehensive scientific study.

3. Scientific and substantive assessment of the research

The dissertation addresses one of the most relevant and strategically The author demonstrates a very good understanding of the existing scientific approaches in the field of corporate valuation and the concept of fair value. The scientific and applied results obtained are directly related to the objective of the research and largely confirm the author's thesis that integrating Monte Carlo simulations into the Discounted Cash Flow method enhances the reliability of fair value estimation for publicly traded companies. The conducted analysis allows me to conclude that the contributions formulated by the doctoral candidate have indeed been achieved and are convincingly supported by both the theoretical and empirical sections of the dissertation.

First, I consider the theoretical contributions to be justified and successfully defended. The dissertation provides a comprehensive systematisation of the development of the fair value concept within economic and financial theory and traces its application in accounting and valuation practice. The author successfully connects classical and neoclassical theories of value with contemporary fair value concepts, thereby establishing a coherent theoretical framework for the research. Particularly noteworthy is the comparative analysis between the international and American regulatory frameworks (IFRS 13 and ASC 820), through which both similarities and differences between the two standards are identified and well-grounded directions for future harmonisation are proposed.

Second, I consider the most substantial contribution of the dissertation to be methodological in nature. The author develops a consistent and reproducible methodology for integrating Monte Carlo simulations into Discounted Cash Flow valuation. The literature review convincingly demonstrates that although simulation techniques are well known in the financial literature, there is a lack of

a clearly structured methodology describing the individual stages of the process in a systematic manner. In this respect, the framework developed by the author represents a genuine advancement of existing research and possesses independent scientific value. An additional methodological contribution is the definition of the algorithmic stages of the simulation-based model, as well as the formulation of criteria for selecting appropriate probability distributions and quantitatively measuring the influence of key factors on valuation outcomes. These results provide the proposed model with a high degree of transparency, consistency, and practical reproducibility.

Third, I accept the applied contributions of the dissertation as fully demonstrated. The proposed methodology has been tested on two publicly traded companies—Rivian Automotive and Vera Therapeutics—which are characterised by high levels of uncertainty, limited historical information, and negative cash flows. It is precisely in such companies that the limitations of traditional DCF models become most apparent. The results show that the use of Monte Carlo simulations allows valuation outcomes to be presented not as a single point estimate but as a probabilistic range with clearly defined confidence intervals. In this way, risk and uncertainty become integral parts of the valuation process, overcoming the weaknesses associated with fixed assumptions.

Particularly important is the fact that the empirical validation is real and includes a comparison between the simulation results and the actual market performance of the analysed companies. Based on this test, the author concludes that the simulation-based approach provides a more realistic and analytically reliable estimate of fair value compared to traditional point-estimate models. This gives me grounds to accept as proven the contribution related to the practical applicability of the proposed methodology in investment analysis, mergers and acquisitions, impairment testing, and risk management.

In summary, I consider the scientific and applied contributions formulated by the author to be correctly identified, convincingly argued, and supported by the necessary theoretical and empirical evidence. The most significant

contribution of the dissertation is the development of a methodologically sound, consistent, and practically applicable framework for integrating Monte Carlo simulations into DCF valuation, thereby improving the reliability and analytical value of fair value estimates for publicly traded companies under conditions of high uncertainty.

4. Assessment of the Publications Related to the Dissertation

The doctoral candidate has presented five scientific publications related to the subject matter of the dissertation. The publications have appeared in academic journals and international conference proceedings and reflect the main directions of the research.

I consider the publication activity to be sufficient both in terms of quantity and quality and fully compliant with the regulatory requirements for the award of the educational and scientific degree Doctor of Philosophy (PhD).

5. Assessment of the Abstract

The abstract accurately presents the content of the dissertation. It reflects the relevance of the research, the object and subject, the aim, the tasks, the methodology employed, the main findings, and the contributions.

In my opinion, the abstract fulfils its purpose and provides a sufficiently comprehensive overview of the dissertation.

6. Critical Remarks, Recommendations and Questions

I have no substantial critical remarks regarding the dissertation. The study is well structured, methodologically consistent, and convincingly supports the proposed research thesis. Nevertheless, several recommendations may be made with a view to future development of the research.

The empirical validation is limited to two publicly traded companies operating in sectors characterised by a high degree of technological and market uncertainty. Expanding the analysis to companies from different industries and

with varying levels of maturity would allow for a broader validation of the applicability and robustness of the proposed model.

It would also be beneficial in future research to devote greater attention to the application of the methodology to privately held companies, where access to market information is significantly more limited and a number of input parameters must be estimated using a higher degree of professional judgement.
These remarks should be regarded as recommendations for further development and do not in any way affect my positive assessment of the quality and scientific value of the dissertation.

I would like to raise the following question:

The proposed methodology has been validated on companies characterised by high growth potential and significant uncertainty. In your opinion, for which types of companies would the application of Monte Carlo simulations provide the greatest added value compared to the traditional DCF model, and are there situations in which the additional complexity of the simulation-based approach is not justified in terms of the quality of the final valuation?

7. General Conclusion and Evaluation

The dissertation submitted by Stefani Georgieva Andreeva represents a completed and independent scientific study devoted to a relevant and significant problem in the theory and practice of corporate finance and business valuation. The research is characterised by a clearly formulated research thesis, a coherent logical structure, a well-argued methodology, and convincing empirical validation of the proposed solutions. The dissertation contains both scientific and applied results that contribute to the advancement of valuation methodology for publicly traded companies under conditions of uncertainty.

The doctoral candidate demonstrates profound theoretical knowledge in the fields of finance, financial analysis and business valuation, as well as the ability to critically assess existing scientific concepts and independently develop and apply research methodologies. Particular merit should be attributed to the proposed

framework for integrating Monte Carlo simulations into the Discounted Cash Flow method, which constitutes a substantial methodological contribution with significant potential for practical application in valuation and investment practice. The dissertation complies with the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria, its implementing regulations, and the Ordinance on Academic Staff Development of New Bulgarian University. The required scientific publications related to the dissertation topic are available, and the abstract accurately and objectively reflects the content and results of the conducted research.

Based on the foregoing, I give my positive evaluation of the PhD thesis entitled "Problems in the Valuation of the Fair Value of Public Companies and Guidelines for Enhancing Its Reliability" and strongly recommend that the esteemed Scientific Jury award Stefani Georgieva Andreeva the educational and scientific degree Doctor of Philosophy (PhD) in the field of higher education 3. Social, Economic and Legal Sciences, professional field 3.8 Economics, doctoral programme "Finance, Monetary Circulation, Credit and Insurance (Finance)".

06 June 2026

Reviewer: ……..

/Prof. Stoyan Prodanov/