ACADEMIC OPINION

by Assoc. Prof. Elena Stavrova, PhD

Member of the Scientific Jury for the award of the educational and scientific degree

"Doctor" (PhD) in Professional Field 3.8. Economics, Doctoral Programme

"World Economy and International Economic Relations"

regarding the doctoral dissertation of

Daniela Dimitrova Popnikolova

entitled

"Adaptation of the Banking System to Financing Sustainable Development"

Scientific Supervisor: Prof. Emil Panushev, PhD

1. General Characteristics and Relevance of the Doctoral Dissertation

The doctoral dissertation submitted for evaluation addresses a highly relevant and dynamically evolving issue – the adaptation of the banking system to the requirements of financing sustainable development. The choice of topic is justified by the fundamental transformation in the role of financial intermediation arising from climate, environmental and social risks, European regulatory policy, and the need to channel financial resources towards sustainable economic activities.

The relevance of the research is further reinforced by the fact that sustainability is gradually ceasing to be merely an element of corporate social responsibility and is becoming a structural component of banking strategies, risk management systems, lending policies, and the business models of financial institutions. Within this process, the Principles for Responsible Banking assume particular importance as a mechanism for translating global sustainable development goals into specific managerial and operational practices.

The research problem is particularly significant for Bulgaria as an economy with a bank-dominated financial system. This provides a strong rationale for examining not only the formal adoption of international principles and European regulatory requirements, but also the actual extent to which they have been integrated into the activities of commercial banks.

The dissertation comprises 217 pages, including 186 pages of main text, and consists of an introduction, three chapters, a conclusion, a bibliography, and 34 appendices. The main text contains 9 figures and 7 tables, while the bibliography comprises 189 sources, the majority of which are in English.

2. Assessment of the Structure, Research Objective, Tasks and Methodology

The structure of the dissertation is logically aligned with the stated research objective. The study progresses consistently from the theoretical clarification of sustainable development and sustainable banking, through the international and European institutional and regulatory environment, to the development and validation of an original methodological instrument and the empirical investigation of the Bulgarian banking sector.

The main objective is clearly formulated: to investigate the process of adapting banking activities to the financing of sustainable development by analysing the institutional and regulatory mechanisms for integrating the principles of sustainable and responsible banking and by assessing their practical implementation and impact on the financial performance of credit institutions.

The research tasks are mutually coherent and correspond to the main objective. I positively assess the formulation of a specific research question and a testable hypothesis concerning the existence of a relationship between the degree of integration of the Principles for Responsible Banking and the financial performance of commercial banks.

The methodological framework of the dissertation combines theoretical and institutional analysis, a comparative case-study approach, an index-based method, correlation analysis, and econometric modelling. Financial performance is examined through ROA, ROE, NIM, and CIR. This makes it possible to analyse the research problem simultaneously from institutional, managerial, and financial perspectives.

A particular strength of the methodology is the attempt to transform the qualitative characteristics of sustainable banking into quantitatively measurable and comparable indicators. In my view, this is precisely where one of the most significant independent methodological results of the dissertation lies.

3. Assessment of the Research Results and Scientific and Applied Contributions

The doctoral candidate identifies six scientific and applied contributions. I broadly accept the contribution statement presented by the candidate; however, I consider that these contributions may also be evaluated and ranked according to the degree of their scientific novelty and practical significance.

First, I regard the development and validation of the Responsible Banking Implementation Index (RBII) as the most significant scientific and applied contribution of the dissertation. The index transforms qualitative information concerning the implementation of the six Principles for Responsible Banking into a comparable quantitative measure. It employs a system of relative weights

and enables a comparative assessment of the degree of institutional integration of the principles within individual credit institutions.

This contribution is methodological and applied in nature, as it offers a solution to an important analytical problem – the limited value of a binary distinction between banks that have formally adopted the principles and those that have not. The RBII makes it possible to assess the depth of their actual integration into banking strategy, governance, target setting, relationships with clients and stakeholders, organisational culture, and public disclosure.

Second, the integrated theoretical framework developed in the dissertation represents a meaningful contribution. It combines the Triple Bottom Line concept, institutional theory, and stakeholder theory. Their joint application makes it possible to conceptualise the transformation of traditional financial intermediation as a process in which financial performance is linked to the social and environmental dimensions of value creation.

Third, I positively assess the systematic analysis of the evolution of the international and European regulatory architecture for sustainable finance. The dissertation traces the transition from voluntary international standards towards an increasing degree of regulatory institutionalisation of sustainability within the European Union and establishes the relationship between sustainability criteria, corporate reporting, financial disclosure, risk management, and capital allocation.

In this context, the analysis of the European Investment Bank as an institutional and financial mechanism for the practical transmission of European sustainable finance policy to financial intermediaries is also of particular relevance.

Fourth, the comparative assessment of the degree of integration of the Principles for Responsible Banking within the Bulgarian banks examined constitutes an independent empirical contribution. The application of the RBII reveals different levels of institutional maturity and demonstrates that the adoption of the same international framework does not automatically result in an equivalent depth of practical implementation.

A particularly noteworthy result of the dissertation is the identified discrepancy – or temporal and functional gap – between the institutional integration of the Principles for Responsible Banking and their immediate impact on traditional indicators of financial performance.

No robust statistically significant independent short-term effect of the examined degree of integration on ROA, ROE, NIM, and CIR is established, while sectoral dynamics are shown to be of substantial importance. This result should not be interpreted as evidence of an absence of economic effects from sustainable banking. On the contrary, it suggests that there is an adjustment period

between institutional change and its manifestation in financial performance, and that these effects need to be investigated over a longer time horizon and through a broader set of indicators.

In my view, this result adds further scientific value to the empirical analysis because the doctoral candidate does not seek to confirm the initially formulated relationship at all costs, but instead interprets the findings in accordance with the empirical evidence.

In terms of their nature, the identified contributions represent an enrichment of the existing body of knowledge in the field of sustainable banking, the development of an original methodological instrument for quantitative assessment, and the application of a scientific approach to the comparative evaluation of banking institutions. I would not characterise the results as the creation of a new independent economic theory, but rather as a theoretical and methodological development and a scientifically grounded applied extension of the existing concepts of sustainable and responsible banking.

4. Publications and Dissemination of the Dissertation Results

The results of the dissertation research are presented in three publications directly related to its subject matter.

They cover key areas of the dissertation: sustainable banking as a process of institutional adaptation; the development of an index for assessing the degree of implementation of the Principles for Responsible Banking; and the role of the European Investment Bank in the development of sustainable banking in the European Union.

I positively assess the close thematic relationship between the publications and the dissertation. Some of the research results were presented at the international scientific conferences “Economic Transformations in the Global World” in 2025 and 2026, demonstrating that significant elements of the dissertation research have been presented and discussed before an academic audience.

The publication activity reflects both the theoretical and institutional dimension of the dissertation and one of its principal independent methodological results – the development of the RBII.

5. Critical Comments and Recommendations

Alongside my positive assessment of the dissertation, several comments and recommendations may be formulated. These do not call into question its principal findings and contributions; rather, they identify opportunities for further development of the research.

First, the empirical analysis is limited to two commercial banks – UniCredit Bulbank AD and Eurobank Bulgaria AD. Their selection is justified by their market significance, commitment to the Principles for Responsible Banking, and the availability of publicly accessible information.

Nevertheless, the inclusion of a larger number of credit institutions would enhance the representativeness of the results and enable broader validation of the proposed index.

Second, the relatively short period of 2019–2025 represents an objective limitation in assessing the relationship between the institutional integration of the principles and financial performance. The finding of a temporal gap itself indicates the need for subsequent research once a longer time series becomes available.

Third, the RBII is an interesting and promising methodological instrument, but its future applicability could be strengthened by additional sensitivity analysis of the results with respect to the weighting scheme employed and by validating the index on a broader sample of banks and, where feasible, across banking systems in other countries. This would allow its robustness and comparative applicability to be assessed more comprehensively.

Fourth, reliance on publicly disclosed ESG and non-financial information inevitably raises issues concerning differences in the scope, quality, and comparability of the available data. This issue is acknowledged in the dissertation, but it remains an important area for the future methodological development of the index.

The above comments should primarily be regarded as recommendations for the further development of the research. They do not alter my positive assessment of the quality of the dissertation and do not have a material adverse effect on the reliability of the results obtained within the clearly defined scope of the study.

6. Statement on the Presence or Absence of Plagiarism

Based on the materials provided to me and my review of the doctoral dissertation, I have identified no evidence giving grounds for suspicion of plagiarism or the improper use of the scientific results of others without appropriate acknowledgement and citation.

The theoretical concepts and sources used in the dissertation are properly identified and cited, while the methodological instruments developed and the empirical results presented are clearly distinguished as the author's own work.

Therefore, on the basis of the materials submitted for evaluation, I find no evidence of plagiarism in the doctoral dissertation.

7. Conclusion

The doctoral dissertation by Daniela Dimitrova Popnikolova, entitled “Adaptation of the Banking System to Financing Sustainable Development”, constitutes a completed and independent

scientific study of a relevant and significant issue concerning the development of contemporary banking intermediation.

The stated research objective has been achieved, the principal research tasks have been fulfilled, and the methodology applied has generated results of theoretical, methodological, and scientific-applied value.

I particularly commend the development and validation of the Responsible Banking Implementation Index (RBII), its comparative empirical application, and the identification of the temporal and functional gap between the institutional integration of sustainable banking principles and the manifestation of their effects on traditional indicators of financial performance.

The critical comments and recommendations presented above do not diminish the scientific value of the dissertation and do not call into question the reliability of its principal findings and contributions.

On the basis of my overall positive assessment of the doctoral dissertation, its scientific and applied research results, the methodological instruments employed, and the publications presented, I confidently recommend that the esteemed Scientific Jury award Daniela Dimitrova Popnikolova the educational and scientific degree "Doctor" (PhD) in Professional Field 3.8. Economics, Doctoral Programme "World Economy and International Economic Relations".

Date: 27 October 2026

Assoc. Prof. Elena Stavrova, PhD