

**Review by a member of the scientific jury
for obtaining an educational and scientific degree "Doctor"
in Academy of Economics "D. A. Tsenov"- Svishtov**

Reviewer: Prof. Dr. Silvia Trifonova Trifonova-Pramatarova

Author of the dissertation: PhD student Julian Sashkov Benov

Dissertation topic: "Current problems of the consolidation of the banking sector - a comparative analysis of the European Union and Bulgaria"

Basis for writing the review: Order № 210 of 29.04.2021 of the Rector of the Academy of Economics "D. A. Tsenov"-Svishtov for appointment of a scientific jury and decision of the scientific jury from a meeting held on 10.05.2021.

I. General presentation of the dissertation

1. The subject of research in the dissertation are the current problems and possible solutions related to the consolidation of the banking sector on the basis of a very in-depth comparative analysis made of the practice in the EU and in Bulgaria.

The enormous work of the PhD student is obvious, which is evident from the overall scientific research. The rich professional experience of the doctoral student in the field of banking and especially his work abroad contributes to this, which enables him to make a precise comparative analysis of the practice of banking consolidation in the EU and in Bulgaria.

I am very impressed by the rich professional practice of the doctoral student in the field of International Banking. Of course, it is also due to his quality education at reputable foreign universities – first, BTU Cottbus, Germany – bachelor's program "Environmental and Resource Management" (in English) and language training in German (2003-2004), and subsequently – Universität Hohenheim, Stuttgart, Germany, specialty "Economics" (Diplom) with specializations "Banking and Finance"/"Accounting and Finance"/"Economic Informatics" (2010-2014).

Julian Benov began his professional career in banking as a trainee in corporate control, accounting and taxes at DaimlerChrysler AG, Stuttgart, Germany (2007-2008), and later as a trainee in corporate performance management at Braincourt GmbH, Stuttgart, Germany (2007-2008) and later – IT consultant at KPMG AG, Stuttgart, Germany (2008-2009).

He has extensive practical experience at BayernLB, Munich, Germany (2010-2017), having consistently worked on IT systems in lending such as the Loan IQ system and Loan IQ settings resulting from systemic and organizational changes in the BayernLB Group (2010-2014), subsequently – project manager in the field of processes, documentation, settings and training in the K2 project for modernization of credit systems through Loan IQ (2014-2015), and after this – risk controlling specialist: liquidity risk – implementation of software versions of the early warning system of possible liquidity risks (MERLIN) and optimization, validation and control of the liquidity risk model of the BayernLB Group (2015-2017).

The PhD student is currently an IT project manager at UBS Business Solutions AG, Zurich (since 2018), where he has successfully completed the strategic project: LIBOR Transition, and the digitalization project: Key 4 Hypotheken, concerning the analysis and evaluation of requirements for multi-lending capacity of mortgage loans.

Extremely impressive is the fact that despite his rich educational and professional career abroad, the doctoral student has chosen as a higher education institution where to defend his dissertation – a Bulgarian university, namely the Academy of Economics "D. A. Tsenov"-Svishtov.

2. The dissertation of Julian Benov has a significant volume of a total of 257 standard pages, of which 215 pages main text.

3. The structure of the dissertation is classical, consisting of an introduction, three chapters, a conclusion, a bibliography and appendices.

In the first chapter the theoretical and applied aspects of the bank consolidation are analyzed in great depth. A thorough review of the existing research related to banking consolidation has been made, summarizing the results of studies by a number of leading authors on the theoretical aspects and practice of mergers and acquisitions (M&A transactions) in the banking sector. On this basis, it is possible for the doctoral student to identify the causes, methods, catalysts and problems in the consolidation of the banking sector, which is based on a thorough study of the experience of a number of countries.

The second chapter is devoted to bank mergers and acquisitions in EU member states. For this purpose, the importance, structure and condition and problems of the consolidation of the banking sector in the EU countries are analyzed. The PhD student has identified 6 groups of current banking consolidation problems in the EU based on the experience of a number of countries. A critical analysis of the approaches for assessing the effectiveness of the concentration of bank capital, namely – the “Structure-Conduct-Performance” paradigm and the model for assessing the effectiveness of the concentration of bank capital is made. The indicators for assessing the degree of concentration – concentration rate, Herfindahl-Hirschman index, Hal-Tidemann index, Horwart index, Hannah Kay index, Hause index, Entropie index, models for the behavior of market participants – Panzer-Rosse model – are considered in great detail. Rosse, Boone indicator, Bresnahan model, as well as the measures related to the market result – Lerner index, interest margin, gross income (Earnings Before Taxes, EBT).

The third chapter examines the current problems of the consolidation of the banking sector in Bulgaria. After an analysis of the structure and condition of the banking system in our country, the doctoral student proceeds to empirical testing of the model for assessing the effectiveness of the concentration of bank capital. The PhD student conducted an online empirical study among specialists in the field of M&A transactions in the period August – September 2020, based on which he derived a ranking of the comparative consolidation attractiveness of the banking sector in the EU. On this basis, the doctoral student calculates the so-called Effective forecast consolidation corridor in the banking sector (Efficient consolidation interval, *ECIBanking*) at the national level, which is optimal not only for banks but also for all other stakeholders - the state, shareholders, bank staff, customers, creditors, suppliers and FinTech companies. Based on this, it becomes possible to formulate specific proposals for effective consolidation of the banking sector in Bulgaria and various alternatives for its consolidation.

The dissertation ends with a summary of the main conclusions of the study, which clearly confirms the goals and objectives of the study, and a proven thesis and three hypotheses of the work.

4. The bibliography includes a record number of literary sources – a total of 436 sources (53 in Bulgarian, 237 in English and 146 in German).

For the first time I come across such a rich bibliography of a dissertation for the award of educational and scientific degree "Doctor", for which the doctoral student Julian Benov deserves admiration.

5. Two appendices are presented to the dissertation in a total volume of 11 pages, including figures and tables. The first appendix includes the final results of the empirical study conducted as of 25.09.2020. The second appendix presents the intermediate group results of the comparative consolidation attractiveness of the banking sector in the EU.

II. Assessment of the form and content of the dissertation

1. The dissertation is devoted to a topic of undisputed relevance for modern banking practice, namely – the consolidation of banks and in particular the comparative consolidation attractiveness of the banking sector in the EU, bringing out current issues related to bank consolidation and possible solutions to solve them.

The doctoral student is very well acquainted with the problems of scientific research, for which contributes his extensive practical experience since 2007 in the field of banking abroad and also it is evident by the correct formulation of the object, subject, purpose, tasks, thesis and hypotheses of the study.

The object of research is bank consolidation. The subject of research is the current problems and possible solutions related to the consolidation of the banking sector.

The main goal of the dissertation is "to make a comparative theoretical and empirical analysis of the consolidation process in the countries of the European Union and Bulgaria". The aim of the dissertation is decomposed into 7 research tasks.

Three hypotheses of the research have been formulated, namely: 1/ The ranking of the comparative consolidation attractiveness of the banking sector in the EU is practically applicable; 2/ It is possible to calculate and implement an effective forecast consolidation corridor in the banking sector at the national level, which at the same time is optimal for all stakeholders; 3/ There is an opportunity to theoretically outline different options for consolidation of the banking sector in Bulgaria and to develop a process recommendation for effective consolidation of bank capital in our country.

The research thesis of the dissertation is formulated as follows: "Assessing the comparative consolidation attractiveness and determining an effective forecast consolidation corridor of the banking system can be used as a basis for developing a process recommendation for its rational consolidation".

The research methodology includes a wide range of research methods. The doctoral student has used in the development of the dissertation historical-logical approach, comparative analysis, systematic approach, method of analysis and synthesis, inductive and deductive method, method of observation, descriptive analysis, survey method, empirical analysis, statistical analysis, graphical and tabular analysis, critical analysis, etc.

2. The dissertation presents an extremely thorough review of the existing literature and research of a number of leading authors on the theoretical aspects and practice in the field of consolidation of the banking sector. The review of the literature reflects the author's own attitude to the issues under consideration.

3. The total volume of the dissertation is 257 standard pages.

4. In the dissertation appropriate graphic and tabular tools are used to illustrate the presented theses. A total of 19 tables and 38 figures are presented.

5. The dissertation is characterized by a sequence of reasoning. A smooth transition was made between the different parts. There is endurance of the scientific apparatus and proportionality of the separate three chapters in the dissertation.

6. Huge arrays of empirical data concerning the consolidation attractiveness of the banking sector of the EU member states have been correctly used and processed. The doctoral student has performed in-depth statistical processing of empirical data, which testifies to his excellent skills to handle specialized statistical and econometric software. The consolidation attractiveness of the banking sector of the EU countries has been assessed through the application of a system of 30 indicators, divided into several groups. The indicators and their individual weights are substantiated on the basis of a literature review and an online survey among experts from the largest credit institutions in Bulgaria, UK, Austria, Germany and Switzerland, as well as consulting companies with experience in M&A transactions in the banking sector.

7. In connection with the implementation of the goals and objectives of the study, the doctoral student has used an extremely large number of sources on the topic, mainly foreign (as mentioned earlier, a total of 436 literature sources, including 53 in Bulgarian, 237 – in English and 146 in German).

8. The abstract accurately and clearly reflects what is written in the dissertation. A positive impression is made by the Reference of the publications of the doctoral student on the topic of dissertation and the Reference for compliance with the national requirements under

the Regulations of the Law for the Development of the Academic Staff in the Republic of Bulgaria.

There are 5 publications on the dissertation topic, published in non-refereed journals with scientific review or in edited collective volumes - incl. 1 study in the Annual Almanac "Research of PhD students", Acad. Publishing-Svishtov, 2020 /under print/; 2 articles, respectively in the Annual Almanac "Research of PhD students", 2018 and 2019; 2 papers, one in English at the International Scientific and Practical Conference "Bulgaria of regions", VUARR-Plovdiv, 2020, and one in Bulgarian at a conference of VTU "St. St. Cyril and Methodius"-Veliko Tarnovo, 2020.

The doctoral student has a total of 40,00 points from publications on the topic of the dissertation with a national minimum required number of points 30,00.

III. Scientific and scientific-applied contributions of the dissertation

The acquaintance with the dissertation allows me to judge that the goal and objectives of the research have been achieved, and the thesis and hypotheses have been confirmed. Based on this, I note with firm conviction that in the dissertation there is enough evidence for scientific and scientific-applied contributions.

I completely agree with the formulated scientific and scientific-applied contributions of the dissertation work of Julian Benov, which are indicated on page 47 in the author's reference to the work and in a separate Reference of the contributions. They are especially important for the banking practice in Bulgaria, given the valuable experience and conclusions derived from the comparison of bank transactions on mergers and acquisitions in the EU member states and Bulgaria.

Of course, the formulated scientific and scientific-applied contributions of the work of Julian Benov could be presented in a more synthesized way, in my opinion as follows:

1. Detailed analysis and systematization of the results of leading research on the theory and practice in the field of consolidation of the banking sector, with emphasis on the system specifics of M&A transactions in the banking sector in Europe and the United States.
2. Outlined key current issues in the development of the banking systems of Bulgaria and the EU member states, and critical assessment made of the state and problems of the consolidation of the banking sector in the respective countries.
3. A comparative analysis and assessment of the consolidation attractiveness of the banking sector of the EU countries through a system of 30 selected indicators, divided into several groups, whose selection is based on a thorough literature review and a survey among experts from the largest credit institutions in Bulgaria, UK, Austria, Germany and Switzerland, as well as consulting companies with experience in M&A transactions in the banking sector.
4. Calculated effective forecast consolidation corridor in the banking sector at the national level, which is optimal not only for banks but also for all other stakeholders – government, shareholders, bank staff, customers, creditors, suppliers and FinTech companies.
5. Formulated specific proposals for effective consolidation of the banking sector in Bulgaria and various alternatives for its consolidation. The possible options are assessed on the basis of their consolidation potential and the time frame for their implementation.

IV. Critical remarks, questions and recommendations of the dissertation

I have no critical remarks to the doctoral student, neither in content nor in technical nature, given the high-value and innovative research he has carried out in his dissertation.

(Only of a technical nature have I found that the various research methods used for the purposes of the study have been described twice, which is absolutely negligible.)

My only recommendation to the doctoral student is for him to publish his dissertation as a single scientific product, so that a wider range of specialists from both the scientific community and the banking practice can get acquainted with it. At the same time, it would be

best to publish the work not only in Bulgarian, but also in English and/or German, in order to gain wide publicity in the banking sector abroad.

The presented dissertation, abstract and publications on the dissertation show a serious and erudite young researcher, with in-depth theoretical and practical training and extensive experience, and with a proven ability for independent research.

V. Summary conclusion and opinion

The dissertation is a completed high-value innovative scientific research, dedicated to an extremely topical and significant problem, developed with modern scientific tools, very in-depth and precise, generating scientific and applied contributions, and of great interest from both scientific and practical point of view for the banking sector. The conclusions made express the doctoral student's own position. The presented proposals are especially valuable for the modern banking practice in Bulgaria.

Therefore, I give my categorical **positive assessment** of the research, presented by the above-reviewed dissertation and abstract, and I propose to the esteemed scientific jury to award the educational and scientific degree "Doctor" Julian Sashkov Benov in the program "Finance, Money Circulation, Credit and insurance (finance)" at the Academy of Economics "D. A. Tsenov"- Svishtov.

Date: 10.06.2021

Reviewer:.....

(Prof. Dr. Silvia Trifonova-Pramatarova)