REVIEW
by a member of the scientific jury,
for obtaining an educational and scientific degree "Doctor"
under the program "Finance, money circulation, credit and insurance" (Finance)
in SA "D. A. Tsenov" – Svishtov

Reviewer: Assoc. Prof. Dr. Ivaylo Mihaylov Mihaylov, habilitated in the scientific specialty 05.02.05 "Finance, Money Circulation, Credit and Insurance".

Author of the dissertation: Mariana Moneva Dauo

Topic of the dissertation: „Current challenges for systemic risk management in the EU financial system (global and regional aspects)".

I. General presentation of the dissertation

The reason for writing the review is the decision of the Faculty of Finance (Minutes № 3/12. 11. 2021) at SA "D. A. Tsenov" - Svishtov, approved by order of the Rector № 1008/16. 11. 2021. The review of the dissertation work has been prepared in accordance with the normative requirements of Law for the development of the academic staff in Bulgaria and is in compliance with the requirements of SA "D. A. Tsenov"- Svishtov for composition and structure of the content.

The subject of the study is the evolution of systemic risk management in the financial system of the European Union and the current challenges in terms of regulatory framework, policies, instruments and real actions, as well as new events that may be systemically significant for the near future of the EU financial system.

The object of research in the dissertation is the systemic risks in the financial system of the EU.

In structural terms, the exposition of the dissertation is presented as follows: introduction, three chapters, conclusion, bibliography and appendices. The development includes 230 standard pages, of which 206 pages are body text, 11 tables and 22 figures. The bibliographic reference includes 190 sources, of which 15 in Bulgarian and 175 in English. A significant part of the literature used has been published in recent years, which shows that the doctoral student is well acquainted with the current state of the problem and the scientific achievements of other authors in the field.

The dissertation presents two appendices in a volume of 5 pages, which include an up-to-date list of global systemically important banks and a regulatory system of supervisory tasks, accountability, discretionary powers, close cooperation, reporting, delegation, fees and sanctions, falling within the remit of the European Central Bank.

II. Assessment of the form and content of the dissertation

The introduction of the dissertation substantiates the relevance and importance of the researched problem of the management of systemic risk in the financial system both at the EU and globally. It recognizes the consequences which can be quite severe and lead to huge economic and financial losses and shocks, and improper distribution of income and resources in the economies. In support of their theses, the author accentuates on the financial crises of recent decades (the Asian financial crisis of 1997, the Russian crisis of 1998, the global financial crisis of 2007-2009, etc.), which ultimately illustrate the importance of systemic risk, as they have a contagious effect, spread beyond the borders of the country in which they have occurred and are associated with severe financial losses and profound social consequences for society. Systemic risks accumulate gradually but arise suddenly and therefore it is difficult to accurately predict systemic events. This justifies the increased research efforts in recent years to study systemic risks and prevent their consequences.

The research thesis, which the author defends, reads: "The implementation of macro-prudential aspects of policy, regulation, supervision and instruments is a necessary condition for managing systemic risks in the modern EU financial system and for ensuring financial stability. Effective management of systemic risks should be based on close coordination between monetary, fiscal and macro-prudential policies, leading to financial stability through the efficient use of monetary resources".

The author aims to study and argue the importance of systemic risk management in the financial system of the European Union in order to ensure financial stability and on this basis to analyze the current challenges to the management of this risk.

In connection with the realization of the set goal, the following tasks are formulated:

First, to analyze the theoretical foundation of systemic risk and its measurement, reviewing the scientific literature.

Second, to analyze the main forms of systemic risk by presenting a more profound discussion and analysis of the financial network and the risk of "contagion" within the financial system; to present a "contagion" matrix and to offer an illustration of the financial relationships in the EU financial system in terms of systemic risk.

Third, to make a critical review, analysis and systematization of the applied models and / or indicators for measuring systemic risk.

Fourth, to examine the role of macroprudential policy as part of the ECB's policy and the regulatory legal frameworks of the Member States of the European Union in systemic risk management, as follows: genesis, nature and tools for systemic risk management in financial risk sphere.

Fifth, to systematize the results of the regulatory reforms and supervision carried out in the EU in order to achieve long-term financial stability, as well as to make a comparative analysis of the methods for assessing systemic risks.

Sixth, to outline the specific features, factual problems and current main challenges to the management of systemic risks in the EU financial system, including to present the results of a study of the BNB's macroprudential policy in the period 2009-2020 and the impact of shadow banking in the EU on systemic risks.

The first chapter has an introductory character and is devoted to the theoretical and applied aspects of systemic risks in the EU financial system with emphasis on retrospective analysis of the period after the Global Financial Crisis 2008 - 2009. It is noted that the vulnerability of the global economy of some significant banks and other non-bank financial institutions has led to a change in the focus of international regulatory approaches - from microprudential to macroprudential regulation. An in-depth review of the specialized economic literature on the concept of systemic risk has been made. The individual factors that contribute to the accumulation of systemic risk in the financial system are consistently derived and analyzed, and on this basis the connection with the spread of the "infection" is derived.

The second chapter presents the methodological and applied aspects of systemic risk management in the EU financial system. A comparative analysis is made and on this basis the shortcomings of financial regulation and supervision before 2008 are highlighted. The emphasis is on the "new era" in the regulation of the financial sector and in particular on the changes in the EU architecture of financial supervision and in particular the role of the European Central Bank in managing systemic risks. In the context of EU macroprudential policies, the author considers the possibility of early identification of macroprudential risks and the possibilities for analyzing the effectiveness of macroprudential equity instruments. A justification for the assumption of systemic risk in the Basel III regulatory standard has been made. Based on the analysis made, doctoral student Mariana Dauo reached the relevant conclusions.

The third chapter is dedicated to the current challenges of systemic risk management in the EU financial system. In the context of this policy, the author highlights the recommendations of the Basel Committee on Banking Supervision for the regulation of systemically important global and national financial institutions, as well as alternative measures widely used in the specialized literature, such as taxation of financial institutions of systemic importance or use. of credit default swaps (CDS). A strong point in Chapter Three is the analysis of the impact of the COVD-19 pandemic and the impact of shadow banking as a possible source of systemic risk and financial instability in the EU.

The conclusion of the dissertation presents the results of the theoretical and applied research of systemic risk management in the EU financial system and the current challenges and problems related to this process. The realization of the set goals and tasks is reflected, with which the thesis of the dissertation is argued.

In methodological aspect, the development is based on the use and application of the methods of comparative analysis, induction and deduction, descriptive, historical, critical, inductive and deductive analysis, and statistical data analysis.

Doctoral student Mariana Moneva Dauo presented a declaration of originality and authenticity, which ensures that the dissertation is authentic and represents its own scientific production.

The volume of the dissertation is completely sufficient for research of the chosen topic. I consider that the exposition of the development is at the required high scientific level, the language is clear, logical and easy to understand. Undoubtedly, the researched issues are relevant with significant theoretical and practical value.

The abstract of the dissertation is developed according to the generally accepted requirements and is in volume of 45 pages. It summarizes the content of the dissertation and presents the most important and main points of the research, which give a complete picture of the research results. There is a reference for the scientific and scientific-applied contributions in the dissertation. A list of publications on the topic is attached, which includes: one study published in a peer-reviewed scientific publication and 4 issues scientific papers, one of which in English, also published in peer-reviewed volumes. In the scientific production, doctoral student Mariana Dauo is the sole author. The total number of points from the published scientific production is 55 and exceeds the minimum threshold of 30 points required for awarding the educational and scientific degree "Doctor", according to the Regulations for application of the Law for development of the academic staff in the Republic of Bulgaria.

III. Scientific and scientific-applied contributions to the dissertation

In the course of his research the author has formulated six contributing moments of scientific-theoretical and scientific-applied nature.

First, systematizing and analyzing a wide range of academic and practical research on the nature, assessment, measurement, regulation and monitoring of systemic risks in the euro area, as well as globally, which contribute to building a multifaceted theoretical foundation to clarify the nature and importance of effective management of excessive systemic risks and strengthening of the early warning function in the current tools.

Second, the theoretical and methodological framework of Basel III with its components is presented in a critical way and the important role of banking stress tests and regulatory policy for maintaining financial stability and managing systemic risks is emphasized. An author's interpretation of the current challenges of the implementation of Basel III, including the impact on the profitability of the banking sector, is given through a deductive approach.

Third, the effectiveness and adequacy of the composite indicators and empirical methods used to measure systemic risks by both the ECB and other central banks in EU countries are analyzed.

Fourth, a comprehensive, systematic and comparative analysis of the application of macroprudential instruments in the European Union and Bulgaria has been performed. Based on this, the need and role of macroprudential mechanisms in the banking sector are clarified. It is confirmed that the macroprudential instruments introduced in the EU are effective, but are highly dependent on the assessment of systemic risk, which sometimes makes it difficult to compare them. There are many arguments in support of the conclusion that building an internationally comparable assessment based on uniform quantitative indicators is impossible, which is why the role of regulators and supervisors remains a key permanent factor in the implementation of macroprudential policy and requires resource allocation in this area.

Fifth, based on the analysis of macroprudential policies conducted within the European Union and globally, the challenges for the ECB and other central banks to ensure financial stability in times of large-scale crises such as the Covid-19 crisis are outlined. The main ones are: to sign a protocol for actions in crisis; to strengthen the accountability of the ECB to the EP and the accountability of local national banks to the ECB with the possibility of a stronger sanctioning function vis-à-vis the bank and the country lagging behind in the implementation of macroprudential policies and instruments; to expand the scope of macroprudential regulation and supervision in order to cover the field of shadow banking, as well as the new fintech companies, whose large-scale growth over the last ten years has induced risks.

Sixth, weaknesses in the analytical, regulatory, analytical and applied aspects of systemic risk management in the EU financial system have been identified and important recommendations have been made on this basis.

IV. Critical notes, questions and recommendations on the dissertation

There are some gaps and weaknesses in the work of the doctoral student, which gives me reason to make the following critical remarks:

1. It is not clear what the role of Figures 1-7 a, b on page 51 is. Nowhere in the text before and after it is its meaning explained. It is not clear from the title of the same figure for which interbank operations the interrelations are shown - in principle for interbank operations or for operations between individual banks (respectively banking groups).
2. The second chapter should be dominated by the analysis and the point of view of the author. The review of scientific achievements and theoretical concepts on the researched issues should be concentrated mainly in the first chapter, and in the analytical part of the dissertation it is necessary to follow the condition and

development of the researched object by applying different models and methods of analysis.
3. There is some discrepancy in the information about the publishing activity of doctoral student Mariana Dauo. The Report lists 5 participations in conferences, and in the abstract - 1 study and 4 participations in scientific conferences.

In connection with the defence of the dissertation, the following specific questions can be addressed to PhD student Mariana Dauo:

1. Explain the concept of "synthetic leverage" and how it enhances the pro-cyclicality of market prices and liquidity conditions (Abstract, p. 35)?
2. What is the relationship between the status "too big to fail" and moral hazard?
3. What arguments would you put forward for and against rescuing systemically important banks?

V. Summary conclusion and opinion

In conclusion, I can summarize my opinion that the dissertation submitted to me for review on "Current challenges to the management of systemic risks in the EU financial system (global and regional aspects)" is devoted to a topical issue in theory and practice, contains significant and current contributions and meets the requirements of the Law for the Development of the Academic Staff in Bulgaria and the Regulations for its implementation.

In view of the arguments presented, I give a positive assessment of the dissertation and call on the scientific jury to vote positively for the award of the educational and scientific degree "Doctor" of **Mariana Moneva Dauo** in higher education 3. Social, economic and legal sciences, professional field 3.8. Economics, scientific specialty "Finance, money circulation, credit and insurance".

Date: December 1, 2021 г.

Reviewer: ....

Assoc. Prof. Dr. Ivaylo Mihaylov