

OPINION

by Associate Professor Ralitsa Simeonova-Ganeva, PhD

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Subject: Competition for the academic position "Associate Professor" in the Professional Field 3 "Social, Economic and Legal Sciences", Scientific Specialty 3.8 "Economics" (Application of computational methods in finance and economics (financial crises and fintech)), which was announced in the State Gazette Issue 30 from 15.04.2022, with the single candidate Deyan Vasilev Radev, PhD

This opinion is prepared based on the Order No. RD-38-275/ 06.06.2022 of the Rector of Sofia University St. Kliment Ohridski and the resolution of the first meeting of the scientific jury with Minutes No. 1/ 27.06.2022. The opinion is in accordance with the requirements set in the Act on Development of the Academic Staff in the Republic of Bulgaria (ADASRB), and the Rules on the Conditions and Procedure for Acquiring Science Degrees and Holding Academic Positions in Sofia University “St. Kliment Ohridski”.

I. Applicant data

The candidate in the competition, Dr. Deyan Radev, has many years of research experience in the field of fintech and digitalization, financial economics, banking regulations, banking and financial stability, systemic risk, economic and financial crises, applied econometrics, etc. From 2011 to the present, he has held research and/or consulting positions at the European Central Bank, ZEW Research Center in Mannheim, and LOEWE Research Center SAFE in Frankfurt. He was a visiting researcher at the Deutsche Bundesbank, Research Center, Frankfurt, at the Institute for Economic Research Halle (Saale) (IWH) and at the European Central Bank, Financial Stability Surveillance Division, Frankfurt. Dr. Radev is currently an R1 Researcher at the "Peter Beron and WE" NGO and Research Fellow and Coordinator at Digital Euro Association, Frankfurt, Germany.

His bachelor's degree is from the Faculty of Economics and Business Administration at Sofia University “St. Kliment Ohridski”. In 2008, he completed a master's degree in *International Economic Relations* at the University of Konstanz in Germany. In 2013, under the supervision of Prof. Dr. Isabel Schnabel and Prof. Dr. Jan-Pieter Krahen, he obtained a PhD in Economics at the Goethe University in Frankfurt, Germany. The topic of his dissertation is "Systemic Risk and Contagion in the European Union", which he defended with the highest distinction (*Summa cum laude*). The awarding of the following two awards to Dr. Deyan Radev for this dissertation work in 2014 was also a notable success: The Award for Best Dissertation/Habilitation in Germany, awarded by the German Institute for Capital Markets and the Special Award for Best Dissertation in Germany, awarded by the Deutsche Bundesbank. Since receiving his doctorate

degree until today, Dr. Radev has participated in seven scientific research projects financed under international programs, a number of prestigious international scientific conferences, and he has been a reviewer in leading scientific journals such as *Journal of Banking and Finance*, *Journal of International Money and Finance*, *Quantitative Finance*, *Economics of Transition*, etc.

In 2009, he began his academic development as an assistant at the Department of Financial Economics, Johannes Gutenberg University Mainz, Germany. In 2015, he became an Assistant Professor of Finance at the Goethe University in Frankfurt, and in 2016 he joined the team at the University of Bonn, where until the beginning of 2020 he taught specialized courses (including courses at advanced level) in the doctoral, master's and bachelor's programs. Since February 2020, Dr. Radev has been an assistant at the Faculty of Economics and Business Administration, Sofia University "St. Kliment Ohridski", where he teaches the following disciplines: *Fintech and E-Banking*, *Empirical Methods in Finance* and *Principles of Banking*.

II. Information on the compliance with the national scientometric requirements

The candidate in the competition has submitted detailed references to which compliance with the minimum national requirements for the scientific and teaching activities of candidates for the academic position "Associate Professor" may be made.

Group A: Dissertation for acquiring educational and scientific degree "Doctor"

There is a successfully defended dissertation on the topic "Systemic Risk and Contagion in the European Union" at the Goethe University Frankfurt, Germany, which corresponds to **50 points** according to *the Rules on the Conditions and Procedure for Acquiring Science Degrees and Holding Academic Positions in Sofia University "St. Kliment Ohridski"* and fulfils the minimum requirements.

Group C: Habilitation work – monograph or scientific publications

The candidate has two monographs published. The first one, which is presented as a habilitation work, is entitled "Economic Crises and Financial Contagion" and was published by Sofia University "St. Kliment Ohridski" in 2022 with ISBN: 978-954-07-5466-6. This work corresponds to **100 points** according to *the Rules on the Conditions and Procedure for Acquiring Science Degrees and Holding Academic Positions in Sofia University "St. Kliment Ohridski"* and fulfils the minimum requirements.

Group D: Other scientific publications

The second monographic work (which is not presented as a main habilitation work) published by Springer in 2022 is entitled “Measuring Systemic Risk: A Probabilistic Perspective” with ISBN:978-3-030-94280-9. This work is referenced in Scopus and Web of Science and corresponds to **100 points** according to *the Rules on the Conditions and Procedure for Acquiring Science Degrees and Holding Academic Positions in Sofia University “St. Kliment Ohridski”* (Indicator 4).

Other scientific publications submitted for participation in the competition include the following:

- Under Indicator 8 (Studies published in scientific publications, referenced and indexed in world-renowned databases of scientific information): two publications referenced in Scopus are presented, which correspond to **90 points** according to *the Rules on the Conditions and Procedure for Acquiring Science Degrees and Holding Academic Positions in Sofia University “St. Kliment Ohridski”*.
- Under Indicator 10 (Published chapter of a collective monograph): one such publication in a book published by Routledge-Giappichelli Publishing House is submitted, which corresponds to **20 points** according to *the Rules on the Conditions and Procedure for Acquiring Science Degrees and Holding Academic Positions in Sofia University “St. Kliment Ohridski”*.

In total, for the indicators from Group D, the candidate has **210 points** with a required minimum of 200 points according to *the Rules on the Conditions and Procedure for Acquiring Science Degrees and Holding Academic Positions in Sofia University “St. Kliment Ohridski”*.

Group E: Citations or reviews in scientific publications

The following citations are submitted for participation in the competition:

- Under Indicator 11 (Citations or reviews in scientific publications, referenced and indexed in world-renowned databases of scientific information or in monographs and collective volumes): citations are presented that correspond to **75 points** according to *the Rules on the Conditions and Procedure for Acquiring Science Degrees and Holding Academic Positions in Sofia University “St. Kliment Ohridski”*.

In total, for the indicators from Group D, the candidate has **75 points** with a required minimum of 50 points according to *the Rules on the Conditions and Procedure for Acquiring Science Degrees and Holding Academic Positions in Sofia University “St. Kliment Ohridski”*.

III. Scientific contributions

The candidate has submitted a detailed report on the scientific contributions with which he participates in the current competition. The main thematic directions of the contributions cover four main areas: 1) banking regulations; 2) measurement of systemic risk; 3) transmission of financial shocks from one financial system to another and to the real economy; 4) establishing macroeconomic effects of the introduction of the digital euro in the Eurozone. These scientific contributions are reflected both in theoretical-methodological and practical-applied aspect.

Contributions of a theoretical nature indicated by the candidate include:

- In-depth literature reviews on narrowly specialized topics and thematic summaries in the above research areas.
- Formulation of new hypotheses in the specialized literature, including: a set of hypotheses for identifying a new channel for the transmission of financial crises through the intra-corporate capital markets of global banks; hypotheses on the impact of different liquidity requirements globally on the cross-border transmission of idiosyncratic shocks; hypotheses on the influence of different monetary regimes such as currency board and dollarization in the host country on the transmission of shocks from abroad through local liquidity requirements.
- Introduction of a set of new systemic risk indicators based on multidimensional probabilities of bankruptcy of banks and countries. A comparison of the new systemic risk indicators with existing indicators in the literature. Analysis of the advantages of the new indicators.
- Defining two types of financial shocks for parent banks and forming hypotheses based on the types of shocks.
- Proposals for innovations in banking regulations and the work of national and international banking regulators have been formulated based on theoretical and empirical analysis, including motivating the need for a digital euro in the context of rapidly developing digital forms of payment and crypto-assets that reduce the volume of physical euro payments; motivating the need to embed international transactions at the heart of the digital euro design as an extension of the ECB's original plans to make digital euro payments only within the Eurozone; Motivating the need for "minimally invasive technology" championed by the Bank for International Settlements, which would not allow disruption of the role of banks as

the main intermediaries in the European financial system and the resulting risks to financial stability in the Eurozone.

The applicant's specified contributions of a practical nature include:

- Applied quantitative analyses, as well as specification and estimation of models, related to the candidate's theoretical research in the above research areas, with some of the empirical applications using techniques and methods not previously used in the literature.
- Formulated proposals (based on the candidate's empirical results) for innovations in banking regulations and the work of national and international banking regulators to take into account the exposure of CEE economies to global banks active in international financial markets.
- Based on in-depth statistical analysis, identify and derive a set of over 15 indicators of systemic risk in the Eurozone based on multivariate probabilities and credit default swaps. These indicators underwent a technical assessment in May 2012 and have been used in the daily work of the European Central Bank as part of the systemic risk measurement toolkit for more than 10 years.
- Applying the derived indicators to credit default swap data on Eurozone bank and sovereign debt. Derivation of guidelines for applying the methodology for determining the size of future rescue financial packages for banks and countries.
- Formulated guidelines for host country regulators during financial crises such as the Global Financial Crisis and the Global Covid-19 Pandemic, including monitoring capitalization levels at parent bank level and requiring global banks to ensure stable sources of funding.

I accept the candidate's contributions formulated in great detail and share the opinion that they have both a theoretical and a practical-applied nature. Some of the listed contributions are of significant value to the regulation of the banking sector, government and financial institutions, and with great potential to be increasingly used in practice in the future.

IV. Conclusion

For the current competition, the candidate Dr. Deyan Radev has submitted a sufficient number of extremely interesting and significant scientific publications that demonstrate high professionalism according to research standards established in international scientific practice.

The candidate is a recognizable researcher, both in Bulgaria and in Europe. The results of his research activities undoubtedly expand the existing knowledge in economic science and practice, and it is no coincidence that some of them are already used by leading financial institutions such as the European Central Bank. The assessment of the candidate's scientometric indicators fully meet the minimum national requirements and *the Rules on the Conditions and Procedure for Acquiring Science Degrees and Holding Academic Positions in Sofia University "St. Kliment Ohridski"* for holding the position of "Associate Professor".

I had the opportunity to meet Dr. Deyan Radev as a student at the Faculty of Economics. I know his work very well as a lecturer and part of the team of the English-language Master's Program in *Applied Econometrics and Economic Modelling* that I direct. Since joining the faculty, Dr. Radev has led two of the specialized disciplines in the program (*Empirical Methods in Finance and Principles of Banking*).

Based on my direct observations from our joint work, as well as on the basis of the high quality of the materials presented within the current competition for the position of "Associate Professor", I can state that Dr. Radev is an extremely disciplined and responsible researcher and lecturer. He has an extremely high level of theoretical training in the field of financial economics and statistical modelling. His research and teaching experience is impressive and of outstanding high quality.

On the basis of the above, and the established compliance of the documents submitted in the competition with the requirements of *ADASRB* and *the Rules on the Conditions and Procedure for Acquiring Science Degrees and Holding Academic Positions in Sofia University "St. Kliment Ohridski"*, with full conviction I give a positive assessment for the selection of the candidate Dr. Deyan Radev for the academic position of "Associate Professor" at the Faculty of Economics and Business Administration, Sofia University "St. Kliment Ohridski", in the Professional Field 3 "Social, Economic and Legal Sciences", Scientific Specialty 3.8 "Economics" (Application of computational methods in finance and economics (financial crises and fintech)).

25.08.2022

Signed:

Sofia

Ralitsa Simeonova-Ganeva