#### **SCIENTIFIC RECENSIA**

by Prof. Dr.Ec.Sc. Rositsa Rangelova Pavlova, Institute for Economic Research at the Bulgarian Academy of Sciences,

member of a scientific jury in a competition for the academic position of "Professor" in professional direction 3.8 Economics (Financial crises and markets in Bulgarian and English), pursuant to Art. 4 and Art. 29a of the Law on the Development of the Academic Staff in the Republic of Bulgaria, Art. 60 et seq. of the Regulations for the Implementation of the Law, Art. 118, para. (1) and (3) of the Regulations on the terms and conditions for acquiring scientific degrees and occupying academic positions at Sofia University (SU) "St. Kliment Ohridski", announced in the State Gazette, no. 35 of 18.04.2023, and decision of the Faculty Council of the Faculty of Economics, protocol No. 10/09.05.2023 and Rector's order No. RD-38-274/25.05.2023.

Only candidate: Associate Professor Dr. Victor Ivanov Yotsov

#### I. Brief biographical data

Victor Yotsov received his higher education at the Higher Economic Institute "K. Marx" (today UNSS) in 1985. In 2002, he obtained a doctorate from the Bulgarian Academy of Sciences (BAS) on the topic "Modelling and forecasting of the macroeconomic development of Bulgaria under the conditions of a monetary board - methodological foundations and empirical results" (according to the diploma). In 1986-1995, he worked as a researcher mainly at the Economic Institute at the BAS, as well as years after that and until today on an additional contract. From 1995 to 2003, he worked at the BNB, reaching the position of Director of the "Economic Research and Forecasts" Directorate. An interesting aspect in Victor Yotsov's biography is the additional high professional qualification he received in the period 1992-2002 in authoritative scientific centers and institutes in various cities and countries: Vienna - Austria, Washington D.C. – USA, Gerzensee - Switzerland, London – Great Britain. From 2003 to 2010, he was the representative of Bulgaria at the International Monetary Fund (IMF), advisor to the executive director at the IMF, Washington D.C (USA). From 2011 until now, he has been employed at UNSS, and since 2015 he has been Asociate Professor in the scientific specialty "Finance, money circulation, credit and insurance (fundamentals of finance)" at the department of "Finance" at the Faculty of Finance and Accounting on a basic employment contract. In 2015 - 2018, he was the director of the Institute of Economics and Policies at the UNSS, and from 2020 - a member of the Supervisory Board of United Bulgarian Bank AD.

Associate Professor Dr. Victor Yotsov (after will be mentioned only as Victor Yotsov) has a significant number of publications in scientific journals in the country and abroad. He is the author and co-author of 9 monographs in the field of macroeconomic management with an emphasis on the development of banking and financial policy. He participated with reports at seminars and conferences, including at the European Commission in Brussels and at the European

Central Bank in Frankfurt. During the pre-accession process, he was a member of working group 11 "Economic and Monetary Union".

These biographical data define Victor Yotsov as a suitable and highly qualified expert, researcher and teacher in the field for which he is applying for the academic position of "Professor" in professional direction 3.8 Economics (Financial crises and markets in Bulgarian and English).

## II. General characteristics of scientific and scientific-applied works

## 1. Fulfillment of the requirements for occupying the academic position

The most general comparison of the quantitative characteristics. Victor Yotsov with the minimum scientometric national requirements of the Ministry of Education and National Centre for Information and Documentation (NACID) for area 3. Social, economic and legal sciences, professional direction 3.8. Economics dictates the following conclusions. The indicators of group A - dissertation work for ONS "doctor" (50 points) and B - habilitation work, monograph (100 points) are fulfilled. For all other groups of indicators, the candidate's points significantly exceed the minimum requirements, with the highest number of points for indicators from group D (sum of indicators from 4 to 10), that is, scientific publications 459.67 points), followed by group indicators D (sum from indicators 11 to 13), that is, citations, where the author has 335 points and indicator group E (sum of indicators from 14 to 21), that is, teaching doctoral students, participating in projects and writing teaching aids, where the author's achievements are significant, but a more modest 185 points). The candidate, Associate Professor Victor Yotsov, PhD, claims 1129.7 points, and they are significantly more than those set according to the quantitative requirements for the required minimum.

The submitted documents for the competition give me reason to assert that the candidate Victor Yotsov fully meets and even significantly exceeds the set of quantitative and qualitative criteria and indicators for the occupation of the academic position "professor" in accordance with the Law (ZRASRB), as well as the rules and regulations according to the SU "St. Kliment Ohridski".

#### 2. General characteristics of the presented scientific publications

Victor Yotsov has submitted 30 of his publications for the candidacy for the academic position of "professor". The majority of the publications are independent (23) and 7 are co-authored, 22 are in Bulgarian and 8 in English.

The author divides his publications into the following groups: monographs and teaching aids - 15 in number; scientific studies – 3; articles in refereed publications - 5; papers for scientific conferences - 7. The monograph from 2021 "Financial crises and systems for their early recognition", Academic Publishing House of the name of "Prof. Marin Drinov" is of particular interest, because the book has the role of a habilitation thesis, and also the 2022 textbook "Financial programming: tools and policies, has published in the UNSS. The both publications thematically cover the stated topic for participation in the competition. Among the participation in 13 collective monographic studies, about half (6) are related to the Annual reports of the Economic Research

Institute at the BAS, some of which he was the scientific supervisor of. In my view, the number 14 indicated here is not a collective monograph, but an article in the journal "Economic Thought".

Systematized, the publications give reason to make the following summaries:

Firstly, the requested number of publications and volume in pages are completely sufficient and even significantly exceed the minimum quantitative requirements to include the candidate Victor Yotsov in the selection for the academic position "professor".

Secondly, his scientific interests and teaching activity are mainly in the field of the financial sector, including markets, which corresponds to the subject of the announced competition for the academic position "professor", professional direction 3.8 Economics (Financial crises and markets in Bulgarian and English).

Thirdly, a large share of the candidate's work covers the topic of macroeconomics, analyzes and forecasts, incl. macroeconomic and financial modeling and forecasting. With this symbiosis of the two directions - macroeconomics and finance, I have associated the coleague of mine Victor Yotsov for years and I realize that it reflects his overall creativity.

Fourthly, from his path of professional development, it is visible that the candidate is actively connected with international institutions and activities, and this speaks of active following of modern international criteria and transfer of knowledge.

# 3. Evaluation of scientific and scientific-applied contributions

Victor Yotsov divides his publications into two groups depending on the predominant contributions - mainly theoretical and practical-applied. Among the contributions of a mainly theoretical nature, the author places first his works related to financial crises and systems for their early recognition. These include the monograph from 2021 No. 1 and two more publications from the same year - No. 9 and No. 13. First, the author justifies his interest in the topic by noting that under the new conditions, "the issue of early warning models for such phenomena is again relevant, because the consequences of each successive crisis are more and more severe and affect more and more countries." The questions he seeks to answer are twofold: (1) what can and should be done to reduce the damage from these adverse events and (2) is it possible to maintain a moderate degree of stability in financial markets in a separate taken region in the presence of liberalized capital flows?

I consider the role of the monograph as a habilitation work, insofar as it is a recent publication covering the subject for which Victor Yotsov applied for the academic position of "professor". In the monograph are presented the main types of financial crises, to reveal the interrelationships and dependencies between them, and to outline the main approaches and tools for early recognition and identification of financial crises. An empirical study has also been made that tests the capabilities of one of the most commonly used approaches (the signal approach) for early warning. With the help of specific author's calculations, it is proven that some of the considered indicators pointed to the presence of nascent problems both in the real and in the financial sector of the Bulgarian economy during the crisis of 2007-2009; A critical analysis and evaluation of the various anti-crisis measures and policies undertaken in both global and national aspects has been made. Unsolved questions and directions for future research are outlined. The need to apply modern statistical-econometric methods for early identification of financial crises is substantiated.

To the group of publications of a mostly theoretical nature, the author also includes publication No. 15, which refers to one of his strengths - macroeconomic and financial modeling and forecasting. Macroeconomic model of Bulgaria is built and tested, taking into account the peculiarities of the economy functioning under the conditions of a currency board. To this group of publications he also includes those related to the subject of Bulgaria's accession to the Eurozone (No. 5, No. 18 and No. 19). The author substantiates and defends the understanding that, given the peculiarities of the Bulgarian economy (functioning under the conditions of a currency board), the benefits of the common currency exceed the potential losses.

I divide the group of publications with contributions of a practical-applied nature into two thematic subgroups. One is related to macroeconomic analysis and policies (publications Nos. 6-8, 10-12, 14, 23) and includes individual related issues such as the role of the external sector in economic growth (Nos. 27 and 28), investment and economic growth (Nos. 17 and 22), social problems (Nos. 20 and 25), fiscal sector and economic growth (Nos. 2, 14, 21, 29, 30).

The other subgroup refers to the issues of the global financial crisis and its impact on Bulgaria's economy (Nos. 1, 2, 3, 4, 21, 29 and 30). The global financial crisis is analysed in the context of modern theoretical models describing and explaining financial crises, tracking the specific mechanisms and channels through which the global crisis entered the Bulgarian economy. Using extensive statistical material, the impact of the crisis on various sectors of the economy is examined, with the emphasis placed on the financial sector. An empirical analysis of liquidity, capital adequacy, interest rates and financial results of the banking sector has been made. The impact of the crisis on the stock exchange, pension and insurance companies and the insurance market has been tracked. What is valuable is that the various anti-crisis measures and policies undertaken both globally and nationally are critically analysed and evaluated.

For the needs of the educational process and the lectures delivered at UNSS, the candidate for the academic position of "professor" Victor Yotsov has independently published a textbook "Financial Programming: Tools and Policies" (2021). In it, the theoretical foundations of financial programming are given, different approaches are distinguished and, based on Bulgaria's experience, assessments of their applicability in the practice of macroeconomic management are made. The real, fiscal, monetary and foreign sectors of the economy are examined, highlighting their specific features in the collection and processing of statistical information and its analysis. The main methods and approaches for preparing short-term and medium-term forecasts for individual sectors have been analyzed. The principles and methodology of drawing up the matrix of financial flows, uniting the mentioned sectors of the economy, are clarified.

The analysis made of the peer-reviewed scientific works of Victor Yotsov in the competition allows me to make the following summaries and conclusions regarding his scientific contributions:

- 1. Modern knowledge about the statistical analysis of time series and its application is systematized and summarized. The author transfers knowledge and enriches existing knowledge in the country himself.
- 2. The author's contributions are both of a theoretical and methodological nature, as well as of a practical-applied nature, which allows him to make specific recommendations for improving the practice in Bulgaria.
- 3. The main merits of the scientific production can be indicated: in-depth analysis, indisputable knowledge of the academic debate on the researched issues and of the documents at

the European and national level, professional approach to the research, skills in formulating conclusions and summaries.

The author has correctly cited the used scientific literary sources.

Victor Yotsov claims 32 *citations* of his publications after his election as associate professor. The most cited (8 times) is the collective publication "Yotzov, V., Bobeva, D., Loukanova, P., Nestorov, N. (2020). Macroeconomic Implication of the Fight against COVID-19: First Estimates, Forecasts, and Conclusions" for the Journal of Economic Studies. Next in terms of interest in them with 4 citations each is also a collective article "Yotzov, V., Loukanova, P., Sariiski, G., Nestorov, N. (2019). Macroeconomic parameters of the development of the Bulgarian economy" in proceedings of the international scientific conference "Economic development and policies - realities and perspectives" and his independent publication from 2000. Yotsov, V., "A possible approach for building a simulation macroeconomic model of Bulgaria", in the Disscusion Papers of the Bulgarian National Bank. A more pronounced scientific interest is also shown in his article from 2014 "Predictive Power of Financial Crisis Early Warning Signals - Theoretical Approaches and Empirical Results", Journal of Economic Studies, Vol. 2/2014, as well as the monograph from 2014 "Reflection of the global crisis on the financial sector of Bulgaria", monograph of the Academic Publishing House "Prof. Marin Drinov".

In order to complement the scientific essence of the author Vcktor Yotsov, it is necessary to mention the numerous scientific projects in which he participated, conferences with papers in the country and abroad, and last but not least, his appearances in the media, as one of the frequently invited moderates and in-depth analysts.

### 4. Evaluation of teaching and learning activity

By certificate of the Directorate "Educational Activities at UNSS from 2022 is verified that Victor Yotsov has a high completed workload, and since the 2015-2016 academic year there has been a predominant workload for the Master's degree program over that for the "Bachelor's degree". During this period, he gave lectures in Bulgarian on the following subjects: basics of finance, economic crises, financial crises, financial forecasting, monetary theory and monetary policy - first level. In English, he gave lectures on the basics of finance and economic crises for an average of 60 hours a year for the "Bachelor's" OCS. It is worth noting that he himself offers a study course on financial crises developed by him - a special elective discipline "Finance".

Victor Yotsov worked as a part-time teacher in other units: part-time assistant in Macroeconomics at the International College of Management, Marketing and Trade (1992-1994); lectures on "International Financial Institutions", "Theory of Money and Credit", "International Finance" at the NBU (2012-2013); lectures on "Banking Management" at the International Banking Institute (2011-2018), etc.

The described teaching activity, together with the issued textbook, present the candidate as a prepared and qualified faculty, suitable to continue and develop his experience in the field of the indicated issues at a new qualitative level.

#### **III. Conclusion**

In summary:

- 1. Victor Yotsov presents himself with sufficient volume, content and contributions of scientific works, scientific-applied activity and teaching work.
- 2. His scientific contributions are the result of many years of research in the field of statistical analysis of time series. He writes at a high professional level, clearly and competently. Along with the rich teaching work he carries out on the topics he researches, he is defined as a specialist who fully meets the notions and standards of the academic position of "professor" for which he is applying.
- 3. Victor Yotsov successfully combines research, teaching and scientific-applied work on the specific issues, which allows him to usefully connect theory with practice and fully train students according to modern international standards.

All this gives me reason to express with full conviction my positive attitude towards the election of Associate Professor Dr. Victor Ivanov Yotsov for the academic position of "Professor" in professional direction 3.8 Economics (Financial Crises and Markets in Bulgarian and English) at the Faculty of Economics of Sofia University "St. Kliment Ohridski".

Date: 9 August 2023 Reviewer:

(Prof. Rositsa Rangelova, Dr. Ec.Sc.)