

# REVIEW

by **Prof. Dr. Stefan Minchev Vachkov**

of the materials submitted for participation in the contest for the academic position of Professor at Plovdiv University “Paisii Hilendarski” in professional degree “3.8. Economics (Finance)”

## **1. Information for the contest**

The contest for the academic position “Professor”, in the field of higher education “3. Social sciences, economics and law”, professional degree “3.8. Economics (Finance)”, is announced in State Gazette, issue 57 of 26 June 2020 for the needs of the department “Finance and Accounting” at the Faculty of Economic and Social Sciences (FESS). I participate as a member of the scientific jury according to order #P33 – 4134/25.08.2020 of the Rector of the Plovdiv University (PU) “Paisii Hilendarski”.

## **2. Information for the candidate in the contest**

The only candidate in the contest is assoc. prof. dr. Stanimir Ivanov Kabaivanov – a lecturer at the chair of “Finance and accounting” of the FESS of PU “Paisii Hilendarski”. He is born on 25<sup>th</sup> of September 1979. He completed his secondary education at OMG "Acad. Kiril Popov"- Plovdiv, specialty “Physics” with English language. In 2002 and 2003 he obtained his educational and qualification degrees “Bachelor in Macroeconomics” and “Master in Financial Management” in PU “Paisii Hilendarski”. After that (2005 – 2010) is a PhD student in “Finance”. During the period from 2011 to 2014 he is a lecturer in “Finance”. Since June 2014 he is elected for the academic position “Associated Professor” at PU “Paisii Hilendarski”, and in November 2015 – for a Dean of FESS. He is a co-founder of “Dronomi” Ltd., developing embedded systems software.

### 3. Fulfillment of the national requirements for holding the academic position "Professor"

The set of materials presented by the candidate on paper complies with the Rules for development of the academic staff in PU and contains *16 documents*.

The following information gives a visual representation for the implementation of the national requirements for holding the academic position of "Professor" by separate groups of indicators:

№	Group of indicators	Points	
		Professor	Candidate
1	A	50	50
2	B	-	-
3	C	100	100
4	D	200	356.64
5	E	100	780
6	F	100	260

#### *Compliance of Groups „A” and „C”:*

Associate prof. dr. Stanimir Kabaivanov fulfills the requirements under *Art. 29* of the Law on Development of the Academic Staff in Republic of Bulgaria (LDASRB), because he had:

- *Art. 29 (1).1 – acquired the educational and scientific degree (ESD) “Doctor” in the scientific specialty 05.02.05 „Finance, Monetary Circulation, Credit and Insurance” with a dissertation on "Evaluation of Investment Projects Using Artificial Intelligence Systems" (diploma # 34903 / 14.01.2011 by the Higher Attestation Commission);*
- *Art. 29 (1).2 – held the academic position „Associate Professor” at PU “Paisii Hilendarski” for 6 years and 3 months (certificate # Y-200/13.07.2020);*
- *Art. 29 (1).3 – published an independent monograph in Bulgarian (Intelligent Systems and Self-Learning Algorithms for Analysis of Financial Instruments.*

Evdemonia Production, Sofia, 2020, 155 pages, ISBN: 978-619-7209-37-2). It provides an in-depth analysis of bond indices and yield curves. Additions to the methods for conducting stress tests are proposed. Special attention is paid to the benefits of mixed learning during the research of market changes.

*Compliance of Group „D” (number of publications):*

Except these, used for acquiring ESD “Doctor” and for the contest for the academic position “Associate Professor”, the candidate presents *45 publications*, of which:

- 1 monograph;
- 20 articles and papers, published in scientific journals, referenced and indexed in *world-famous databases* of scientific information: Q1 (12\_5, 12\_14); Q2 (12\_6); Q3 (12\_1, 12\_7, 12\_8, 12\_9); Q4 (12\_2); SJR (12\_10, 12\_11, 12\_12, 12\_15, 12\_16, 12\_17, 12\_18, 12\_19, 12\_20). This number of publications exceeds *ten times* the additional requirements of FESS at PU “Paisii Hilendarski” for holding the academic position “Professor”;
- A collective monograph, indexed in Scopus (12–3, 12–4);
- 24 articles and reports, published in non-referred journals with scientific review or published in edited collective volumes (12\_31 to 12\_44);

With a minimum requirement for 200 points for scientific publications, which are referenced and indexed in world-famous databases with scientific information or in non-referenced but peer-reviewed publications, *356.64 points* are reported.

- Accepted for printing - 2 publications (12\_19 and 12\_20).

All publications (most of which in English) are developed in a high, clear and logical scientific style and are *entirely his work* (LDASRB, Art. 29(1).6). In addition to the *excellent theoretical training*, they demonstrate *enviable skills for empirical research* using a rich arsenal of methods and models. Most significant conclusions and suggestions are illustrated with multiple figures, diagrams and tables. The indicated literature sources and attachments are *correctly* used and / or commented in the exposition of each work.

*Compliance of Group „E” (information for citations):*

База данни	Цитирания	Показатели
Scopus	18 citations without self-citations (of 15 documents)	H=3
Web of Science	13 citations without self-citations (of 17 documents)	H=3
Google Scholar	124 citations	H=6, I10=2
Mendeley	18 citations (of 12 documents)	H=3

There is an almost eight-fold overfulfillment (*780 points*) of the required minimum (100 points) for citations of candidate's publications.

With a minimal requirement for 100 points per Group „F” (textbooks and projects) there are reported *260 points*.

#### **4. Fulfillment of the additional requirements of FESS for holding the academic position “Professor” (according to protocol # 144/ 19.06.2020)**

##### *1. Authorship of textbooks and teaching aids:*

- Kabaivanov S., V. Markovska, Valuation of financial instruments with R, Sofia, Evdemonia production, 2019, 250 pages., ISBN 978-619-7209-30-3;
- Examples and tests and support materials available to students online in the Moodle system of FESS.

##### *2. Preparation and conducting of lectures:*

Holding the academic position of “Associate Professor” the candidate has a teaching load of 2 043 hours in lectures and 352 hours in seminar classes (including 120 hours in lectures and 45 hours in seminar classes for the academic year of 2019/2020) in a number of disciplines: „Public Finance”; „Corporate Finance”; „General Financial Theory”; „Basics of Finance”; „Econometrics”; „Modern Methods for Investment Analysis”; „Derivative Markets”, „Applied Analysis of Financial Data” and „Special Course in Econometrics”. He has developed curricula in 4 disciplines („Corporate Finance”; „Econometrics”; „Applied Analysis of Financial Data” and „Modern Methods for Investment Analysis”). Since January 2017 he is a guest lecturer in the Faculty of Economics at SU „St. Kl. Ohridski” (masters programmes).

*3. Participation in scientific and research developments:*

- Utility registration certificate BG 3864/20.09.2017 by Patent Office of Republic of Bulgaria „Integrated Control System for Autonomous Unmanned Aerial Vehicles“, „Dronomi“ Ltd. (co-author);
- 11 scientific and research projects (leader of three and coordinator of one project);

*4. Participation in professional organisations and review of scientific publications:*

- a member of The econometric society: Financial Engineering Solutions;
- a reviewer of Heliyon (in Heliyon Business and Economics) – a magazine in Q1;
- guest editor of “Algorithms” (ISSN 1999-4893) of the special issue “Big Data Analytics, Algorithms and Programming” BASEL;
- guest editor of the special issue of the International Journal of Interactive Multimedia and Artificial Inteligence (ISSN 1989-1660);
- guest editor of the issue of Entropy “Statistical Physics for Digital Economy”, (ISSN 1095-4300) – a magazine in Q2, 2020.

*5. Participation in scientific juries and expert groups in Bulgaria:*

- 5 participations in scientific juries for awarding the academic positions "Associate Professor", 5 - for "Chief Assistant" and 10 - for awarding the ESD "Doctor";
- a member of the EG of NEEA for programme accreditation in UNWE (in professional fields „3.8” and „3.7”) and in University of Economics - Varna (field „3.8”);
- a lecturer in the Erasmus IP programme in the city of Iasi – Romania;
- presented plenary report in 2018 г. at international conference held in the „Alexandru Ioan Cuza” University of Iasi.

*6. Supervision of PhD students:* one defended in 2017 г., an upcoming defense in 2020 and one PhD student in FESS.

I consider that assoc. prof. dr. Stanimir Kabaivanov has a *high* scientific and teaching qualification. The results achieved by him in his teaching and research activities *fully meet* the additional requirements of the Faculty of Economics and Social Sciences, adopted in connection with the Rules of the PU for the application of the LDASRB for the academic position of "professor".

### **5. Assessment of candidate`s personal contribution**

The statements in candidate`s works with character of *scientific and practical contributions* are a result from the application of existing theories for analysis and solution of specific socio-economic problems and for explanation of significant processes with formulated conclusions and recommendations.

The more significant of them are:

1. An original approach to the study of financial crises and a method for assessing the effects of the transfer of economic problems have been proposed and tested (publication 12\_14).
2. Methods for effective valuation of options (including exotic derivatives - publications 12\_1, 12\_9, 12\_12, 12\_16, 12\_22, 12\_26) have been argued and practically tested, as well as innovative approaches for applying the Monte Carlo method in the analysis of derivatives (publications 12\_10, 12\_15, 12\_20, 12\_25, 12\_38).
3. Solutions for evaluation of innovative projects and management of company`s resources with the help of intelligent data analysis systems and real options are substantiated (publications 12\_11, 12\_18, 12\_37).
4. Different econometric models for analysis of cryptocurrencies` markets have been tested (publications 12\_2 and 12\_41).
5. Solutions for an early detection and mitigation the consequences of cyberattacks using self-learning algorithms are proposed (publications 12\_17, 12\_40).
6. Applied are statistical and mathematical methods for comparative analysis in international projects` development, results from which provide clarity for better understanding of a number of social processes – attitudes, problems, professional realization and social inclusion of young people, political mobilization and participation,

culture and values, international migration and mobility, public policies, international cooperation and etc. (publications 12\_3, 12\_4, 12\_5, 12\_6, 12\_7, 12\_8, 12\_13, 12\_24, 12\_29-35, 12\_36, 12\_42, 12\_43, 12\_44).

## **6. Critical remarks and recommendations**

I have no critical remarks about the candidate.

## **CONCLUSION**

*Documents and materials presented by the candidate meet all the requirements of LDASRB, the regulations for its implementation and the Rules for development of the academic staff in PU “Paisii Hilendarski”. I find it justifiable to give my positive assessment of his scientific and teaching work and with full conviction to recommend the scientific jury to prepare a report proposal to the Faculty Council of FESS for election of Stanimir Ivanov Kabaivanov at the academic position “Professor” at PU “Paisii Hilendarski” by professional field 3.8 “Economics (Finance)”.*

15 October 2020

Varna

Reviewer:

(Prof. Dr. Stefan Vachkov)