

OPINION

By : Prof. Dr. Vesselin Ivanov Hadzhiev

Department of Statistics and Applied Mathematics, University of Economics
– Varna

Subject : dissertation for obtaining a educational and scientific degree "Doctor" in "Social, Economic and Legal Sciences", professional field 3.8 "Economics", doctoral program "Economics and Management (Construction and Real Estate)" at the University of Economics - Varna.

Author of the dissertation : Blagovest Plamenov Iliev

Dissertation topic : "Impact of basic macroeconomic factors on real estate investments in Bulgaria."

1. Information about the doctoral student

Blagovest Iliev has been enrolled in part-time doctoral studies, state order (order No. RD 17-272/05.07.2022). By order of the Rector No. RD 17-526/28.09.2022, the form of study is changed to full-time, state admission with a deadline of 01.09.2025. The doctoral student has successfully completed his individual study plan, collected the required number of credits.

The PhD student has 15 years of work experience in various companies in the UK and Bulgaria. He has held various positions such as auditor, consultant, project manager, etc.

2. General presentation of the dissertation

The dissertation work submitted for review by Blagovest Iliev is the result of an independent scientific study. The introduction clearly highlights the relevance and significance of the research issue. The object and subject of the study are correctly distinguished. The object of the dissertation is defined as the direct and indirect investments in real estate in Bulgaria. The subject is the interaction between selected macroeconomic factors and asset prices.

The aim of the dissertation is specified in four research tasks: (1) specifying the main categories of real estate and investments in them and selecting macroeconomic factors; (2) analyzing the direct and indirect investments in real estate in Bulgaria; (3) determining the macroeconomic factors that significantly

influence the capital return on direct and indirect investments in real estate and (4) building a regression model for the interaction between macroeconomic factors and real housing prices in the country and building short-term forecasts.

The author argues that there are differences between the macroeconomic factors that have a significant impact on asset prices for direct and indirect real estate investments in Bulgaria during the period under review. To defend this thesis, the doctoral student tests the following two hypotheses: (1) the macroeconomic factors influencing the direct and indirect investments are different and (2) there are reasons to build a model determining the impact of individual factors on residential property prices and their forecasting.

An appropriate research technique was used, which includes the methods of induction and deduction, fundamental analysis, comparative analysis, statistical and econometric analysis, cointegration approach, etc. The limitations of the study are correctly indicated.

The dissertation meets the requirements of Art. 27, para. 2 of the Regulations for the Implementation of the Act on the Development of the Academic Staff in the Republic of Bulgaria.

3. Assessment of the structure and content of the dissertation

The dissertation has a total volume of 182 pages. The structure of the presentation is well-founded, consistency and connection between the treated problems. The dissertation consists of an introduction (5 pages), main text in three chapters (152 pages), conclusion (5 pages), used sources (149). The presentation is richly illustrated with 56 tables and 19 figures.

The author proves his theses empirically by processing a large volume of data and applying econometric methods and models. My viewpoint on their application is presented below.

Blagovest Iliev uses statistical data from public sources – BGREIT, NSI, Eurostat, etc. He competently applies appropriate transformations to the primary data (logarithmization, differentiation) in order to prepare them for the construction of econometric models.

From an econometric point of view, the author applies the philosophy and methods of the cointegration approach. This includes the Granger test, Dickey-Fuller test, Johansen test, VAR model, error correction model, etc. I note an accurate and capable application of the requirements and procedures of econometric analysis, meticulous rigor towards the statistical reliability of the estimated parameters, etc.

The author competently reads and interprets regression models. He makes reasonable predictions about real housing prices based on econometric models.

The style of the dissertation is concise and precise. The text is presented in scientific language. The doctoral student has presented a well-structured and logically consistent study.

In terms of structure and content, the dissertation corresponds to the requirements of Art. 34, para. 2 and para. 3 of the Regulations for the Development of the Academic Staff at the University of Economics - Varna.

4. Scientific and applied scientific contributions in the dissertation work

There are grounds to admit the following scientific and applied scientific contributions of doctoral student Blagovest Iliev.

First, from a theoretical perspective, a well-founded model of real estate investments has been built, the category "real estate" has been refined, and the factors that influence the investment process and prices have been determined.

Second, empirically, based on statistical data and the Granger test, the macroeconomic factors influencing the prices of investment assets in the short and long term are determined.

Third, a regression model was built to predict real housing prices in the short term. A forecast for housing price changes was prepared for the period 2024-2026.

The research thesis was confirmed by testing the hypotheses.

5. Publications and participation in scientific forums

Blagovest Iliev has presented three publications in which he popularizes his dissertation theses. The publications include two articles and one report in renowned scientific journals and forums.

The doctoral student fulfills the quantitative requirements under Art. 35, para. 1 of the Regulations for the Development of the Academic Staff at the University of Varna and meets the minimum national requirements for the award of the educational and scientific degree "Doctor".

6. Evaluation of the autoref

The presented abstract summarizes the content of the main structural parts of the dissertation work and meets the regulatory requirements.

7. Presence or absence of plagiarism in the dissertation and/or abstract

There is no proven plagiarism in the dissertation.

8. Notes and recommendations

Forecasting real house prices in the short term is a complex and complicated process. At the same time, short-term forecasts always gravitate towards the long-term trend. I recommend that future research on real estate investments and house prices take into account some basic macroeconomic principles. In other words, in a completely open economy (a common market for goods, money, labor, etc.), prices always tend to the average prices. Volatility is natural in the short term. But in the long term, prices in smaller markets always tend to the average prices in larger markets.

9. Questions for the dissertation candidate

How can the lack of correlation in the short term between real house prices and inflation explained economically or statistically?

10. Conclusion

The dissertation work proposed for opinion "Impact of the main macroeconomic factors on real estate investments in Bulgaria", developed by Blagovest Plamenov Iliev, possesses the necessary qualities to be defended for the award of the educational and scientific degree "Doctor" in Area 3 "Social, Economic and Legal Sciences". This gives me reason to propose to the members of the esteemed jury to vote positively for the award of the educational and scientific degree "Doctor" to Blagovest Iliev.

Varna

15.08.2025

Prepared the opinion:

(Prof. Dr. V. Hadzhiev)

Заличена информация съгласно
ЗЗЛД и регламент (ЕС) 2016/ 679



ИКОНОМИЧЕСКИ УНИВЕРСИТЕТ ВАРНА

SCIENTIFIC OPINION

Вх. № РА20-1134/28.07.2025г.

by

Assoc. Prof. Dr. Yana Georgieva Stoencheva

Real Estate Department

University of National and World Economy – Sofia

Regarding: Dissertation by PhD student Blagovest Plamenov Iliev, University of Economics – Varna, Faculty of Business, Department of “Business, Investments, Real Estate”

1. General Information: This opinion has been prepared pursuant to Order RD-06-91/29.05.2025 of the Rector of the University of Economics – Varna for the formation of a Scientific Jury for awarding the educational and scientific degree "Doctor" in professional field 3.8. Economics, scientific specialty "Economics and Management (Construction and Real Estate)", in accordance with a publicly announced procedure by the University of Economics – Varna.

Title of the dissertation: *The Impact of Key Macroeconomic Factors on Real Estate Investments in Bulgaria*

2. General presentation of the dissertation: The presented dissertation meets the requirements set out in Art. 27, para. 2 of the Regulations for the Implementation of the Law on the Development of the Academic Staff in the Republic of Bulgaria and the corresponding provision in Art. 56, para. 2 of the Internal Regulations of the University of Economics – Varna. It comprises 182 pages and includes a title page, table of contents, introduction, three chapters, a conclusion, and a bibliography.

3. Publications related to the dissertation: In support of the dissertation defense, the PhD student has provided evidence of three independent scientific publications, including two scientific articles and one scientific report, which meet the formally defined requirements.

These publications explore in depth the influence of certain macroeconomic factors on housing prices, such as inflation, unemployment, and interest rates. Significant differences in the strength of the correlation between these factors and housing prices are identified. This is explained by national specifics, such as the relatively low share of homes in Bulgaria purchased with the help of bank loans. The impact of the COVID-19 pandemic on the studied processes is also analyzed. Reliable data sources and appropriate statistical methods have been used. The conclusions drawn are consistent with well-researched findings of other scholars on the real estate markets in Europe and the United States, which are correctly cited. Noteworthy is the conclusion that during the studied period, residential real estate investments in Bulgaria served as a reliable hedge against inflation. Based on an international comparison of the long-term return on residential real estate investments in Bulgaria, the Eurozone, the UK, and the US, the author concludes that direct investments (i.e. property purchases) are less



risky, more profitable, and preferable to indirect investments (e.g. purchasing shares in special purpose real estate investment companies).

4. Scientific contributions in the dissertation: The dissertation has been developed in accordance with accepted best practices. It is well-structured, written in an analytical style, with clearly presented tables and graphs. The relevance of the topic is convincingly demonstrated. A competent review of existing research on the topic has been conducted. The object, subject, goals, and tasks of the study are well-formulated in line with the title and content of the dissertation. The research hypothesis is realistic and has been successfully proven as a result of the conducted scientific work. Limitations have been conscientiously discussed.

The methodological issues are addressed with diligence and precision, including the classification characteristics of real estate, the specifics of real estate investment, and the interaction of certain macroeconomic factors with the prices of investment assets. The author is aware that in some aspects the available data are insufficient or must be interpreted with caution due to the nature of residential real estate as a unique asset, which complicates the creation of a statistically uniform population in terms of location, infrastructure, proportion of new and old buildings, property management, etc.

The methods used for quantitative analysis are appropriately chosen and skillfully applied. The obtained results are clearly and thoroughly interpreted. The author demonstrates developed skills in identifying problems and in creatively searching for and finding solutions. It is evident that the PhD student is well-acquainted with reliable data sources and knows how to collect information relevant to the research objectives. He skillfully uses academic terminology, leaving no doubt about his understanding of the subject matter. The full potential of regression models is utilized as a tool for analysis and forecasting. The decision to work with time series in the analysis of relationships and dependencies using statistical methods deserves recognition and a high evaluation, given the complexity of the procedures involved.

5. Compliance of the abstract with the requirements: The abstract is sufficient in scope, and its structure and content accurately reflect the results achieved in the dissertation.

6. Contributions of the dissertation: I fully accept the theoretical and applied contributions formulated by the author.

7. Has plagiarism been identified?: I am not aware of any form of plagiarism identified in the dissertation or in the accompanying abstract.

8. Critical remarks and recommendations: Recommendations include:

- The contributions achieved in the dissertation could be grouped into theoretical and applied contributions.
- The conclusion section could be more specific, emphasizing the essence and practical relevance of the results obtained.

Question: Does the author have any ideas on how the real estate market in Bulgaria could be regulated in such a way that transaction prices become more realistic?

9. Conclusion: As a result of the above-mentioned strengths of the dissertation, I strongly recommend that the esteemed Scientific Jury award Blagovest Plamenov Iliev the educational



and scientific degree "Doctor" in professional field 3.8. Economics, scientific specialty "Economics and Management (Construction and Real Estate)".

Sofia, 23.07.2025

Заличена информация съгласно
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Author of the opinion:

/Assoc. Prof. Dr. Yana Stoencheva/)

OPINION

by Assoc. Prof. Dr. Dragomir Zelchev Stefanov

regarding a dissertation for the acquisition of an educational and scientific degree "doctor" in PF 3.8 "Economics", doctoral program "Economics and Management (Construction and Real Estate)" with **author Blagovest Plamenov Iliev**

1. General information.

Prepared by: Assoc. Prof. Dr. Dragomir Zelchev Stefanov, lecturer in the "Real Estate" department at the Business Faculty of UNWE - Sofia, scientific specialty "Economics and Management".

Reason for providing the opinion: Order of the Rector of IU-Varna No. RD-06-91/29.05.2025, Varna for the election of the scientific jury and Decision of the scientific jury dated 11.06.2025 for determining reviewers and expressing opinion.

Author of the dissertation: Blagovest Plamenov Iliev, full-time doctoral student in PF 3.8 Economics, doctoral program "Economics and Management (Construction and Real Estate)" at the "Business, Investments and Real Estate" Department, awarded with the right of defense by Order of the rector of Varna University. Dr. Iliev has successively completed Bachelor's degree (2008) and Master's degree (2009) in economic specialties in the UK.

Dissertation topic: Impact of main Macroeconomic Factors on Real Estate Investments in Bulgaria.

2. General framework of the dissertation work.

The dissertation has a total volume of 182 standard pages, incl. bibliography (149 sources). The work has a standard approved structure – an introduction, three chapters, each with three paragraphs and a conclusion.

In the introduction, the author has correctly justified the necessity of the topic and connects it with the upcoming adoption of the euro in our country and the significance of this fact on the return on direct and indirect investments in the real estate market. The object and subject of the study, the goal and the research tasks of the work have been consistently correctly formulated. The thesis that the author supports in the dissertation is that there are differences between the macroeconomic factors that have a statistical impact on asset prices in direct and indirect investments in real estate in Bulgaria during the period under review, although both types of investments are based on real estate.

The **first chapter** is devoted to the theoretical foundations of real estate and investments in it. The author explores the essence of some basic concepts and refines some of them in the chapter. An author-adapted classification of real estate has been made, which reflects various theoretical and applied aspects of their essence. The specifics of investments in real estate in the real and financial sectors are highlighted, with an emphasis on the differences between direct and indirect investments. The first chapter ends with a detailed analysis of research conducted on the relationship between basic macroeconomic factors and the prices of

investment assets - both on the international and Bulgarian markets. In the case of direct investments in real estate, the prices of residential properties are examined, and in the case of indirect investments - the prices of REIT securities.

The **second chapter** selects the indicators that are subsequently studied and presents the author's developed methodology for conducting an empirical study of the markets for direct and indirect investments in real estate, and their relationship with some of the main macroeconomic factors. A comparative analysis between Bulgaria and the Eurozone of the selected indicators included in the study is implemented.

The **third chapter** presents the results of the empirical study, which are interpreted, and a comparative analysis is implemented between the relationship of the capital return on the markets for direct and indirect investments in real estate and the selected macroeconomic factors in Bulgaria. The mutual influence of the significant factors on the real prices of houses in short term is also studied, and in the last paragraph a regression model is used to compile a forecast for the development of house prices in the next few years.

3. Publications and participation in scientific forums.

Doctoral student Iliev has submitted a list of three publications on the topic of the dissertation – one report in Bulgarian at scientific conferences and two articles in the indexed specialized scientific journals. The submitted publications meet the requirements of the law and the regulations for its application.

4. Assessment of the structure and content of the dissertation.

The dissertation submitted for review meets the requirements of Art. 34 of the Regulations for the Development of the Academic Staff at IU-Varna. The work shows the author's good knowledge of authoritative theoretical studies on the subject, as well as his ability to carry out such studies himself. The structure of the dissertation is standard, each chapter and paragraph ends with a short summary and conclusions. The work follows its logical sequence, the style of expression is clear and understandable, the formatting conforms to the standards in the field. Literary sources are correctly cited in the main text of the development and listed at the end.

The abstract meets all generally accepted requirements for volume, structure and content. In it, the dissertation student reflects correctly, both in terms of structure and content, what is presented in the dissertation work. In a total volume of 36 pages, a general description of the work, a reference to the scientific contributions and a list of the author's publications on the subject are presented.

5. Identification and assessment of scientific and scientific-applied contributions in the dissertation work.

In his abstract, doctoral student Iliev has formulated four contributing points. I would define two of them (the first and the second) as purely scientific, and the other two as those with a scientific-applied element. I largely accept the contributory nature of the formulated contributions.

6. Confirmed or unconfirmed plagiarism in the dissertation and the abstract.

When familiarizing myself with the dissertation work and the author's reference to it, I **did not find any plagiarism** in the sense of §1, item 7 of the Additional Regulations of LDASRB.

7. Critical notes and recommendations.

I have no critical comments on the submitted for review work. One of my recommendations to the author is that in future research, the influence of people's expectations on property prices should be taken into account, along with macroeconomic factors and their respective returns. The recommendation made in no way detract the value of the dissertation or change my overall positive opinion of it.

8. Questions for the PhD student.

I would like to ask the PhD student the following question: From today's perspective, your forecasts for 2024 and 2025 for real housing prices in Bulgaria are not confirmed by the market. What do you think is the reason for this and what is your new (revised) forecast for 2026 - the year after the adoption of the euro?

9. Conclusion:

Taking into account the above mentioned comments and the achieved results, I give a positive assessment of the presented dissertation work. It fully meets the requirements of the LDASRB and the Regulations for its implementation, as well as the Regulations for the development of the academic staff at UE-Varna. Based on this, **I strongly recommend the respected scientific jury to award the educational and scientific degree "doctor" in PF 3.8. Economics, doctoral program "Economics and Management (Construction and Real Estate) of Blagovest Plamenov Iliev.**

Sofia, 31.07.2025

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(Assoc. Prof. Dr. Dragomir Stefanov)