



## REVIEW

### 1. General Information

Reviewer: Prof. Dr. Georgi Shinkov Zabunov – Head of the Department of Real Estate at the Faculty of Business, University of National and World Economy – Sofia; Professional Field 3.8 “Economics”; Scientific specialty: “Economics and Management (Real Estate)”.

Grounds for preparing the review:

This review has been prepared pursuant to Art. 4, para. 8 of the Law on the Development of the Academic Staff in the Republic of Bulgaria (LDASRB) and Art. 8, para. 2 of the Rules for the Development of the Academic Staff at the University of Economics – Varna, in connection with Rector’s Order No. RD-06-91/29.05.2025, amended by Order No. RD-06-111/25.06.2025, by which a scientific jury was appointed for the procedure for the public defense of the dissertation of PhD student Blagovest Plamenov Iliev.

At the first meeting of the scientific jury, held on 11.06.2025 in hybrid format, Prof. Dr. Georgi Shinkov Zabunov was appointed as reviewer, jointly with Assoc. Prof. Dr. Todor Stoyanov Raychev (UE–Varna).

Author of the dissertation: Blagovest Plamenov Iliev.

Title of the dissertation: “Impact of Key Macroeconomic Factors on Real Estate Investments in Bulgaria”.

### 2. Data about the PhD Candidate

PhD student Blagovest Plamenov Iliev was born on 11.02.1985 in Varna. He graduated from the First Language School – Varna in 2004, with a specialization in English. In 2008 he obtained a Bachelor’s degree in Economics from Aston University (UK), and in 2009 – a Master’s degree from City University London, with specialization in finance, accounting, financial analysis, management, investment, and real estate development. Between 2010–2013 he completed the professional qualification Associate Chartered Accountant (ACA) at the Institute of Chartered Accountants in England and Wales (ICAEW).

His professional experience includes financial audit at EY London (2010–2013), consultancy at British Telecommunications (2014), and management of consulting projects at InterBPI Limited, London (2015–2022), specializing in business analysis and financial processes of companies listed on the London Stock Exchange. Since 2022 he has been Project Manager at Build Investment Ltd. – Varna, responsible for managing investment projects in the field of real estate.

The PhD candidate has prepared in the doctoral program “Economics and Management (Construction and Real Estate)” at the Department of Business, Investments, Real Estate at the University of Economics – Varna, within Professional Field 3.8 “Economics”. His doctoral studies were initially part-time (state quota) and later, by Rector’s Order No. RD-17-526/28.09.2022, converted to full-time (state quota).

The PhD student has successfully completed the doctoral curriculum, passing all examinations in the specialty, foreign language, and elective subject. He has excellent command of English (written and spoken).



His academic preparation and extensive international professional experience demonstrate a consistent and focused interest in economics, finance, and real estate investments. The acquired academic degrees, professional qualifications and certifications, combined with proven practical expertise in project management and financial analysis, confirm his high professional competence and expertise in the subject area of the dissertation.

### 3. General Presentation of the Dissertation

The dissertation of PhD candidate Blagovest Plamenov Iliev is entitled “Impact of Key Macroeconomic Factors on Real Estate Investments in Bulgaria”. It was prepared within the doctoral program “Economics and Management (Construction and Real Estate)” at the Department of Business, Investments, Real Estate at the University of Economics – Varna, under the supervision of Assoc. Prof. Dr. Bozhidar Chaparov.

The dissertation consists of 182 pages, including introduction, three chapters, conclusion, bibliography of 116 sources and 33 electronic references, 56 tables, and 19 figures. Its structure follows the logic of academic research – from justification of the topic and definition of object, subject, aims, and tasks, through methodology and empirical analysis, to synthesis of results and formulation of conclusions and forecasts.

The topic is both timely and significant, as real estate plays an important role in the national economy and in investors’ portfolios. In the context of dynamic market changes, rising prices, and Bulgaria’s forthcoming accession to the euro area, the analysis of how macroeconomic factors influence returns on real estate investments acquires considerable practical importance.

Object of research: direct and indirect real estate investments in Bulgaria.

Subject: the interaction between selected macroeconomic factors and asset prices determining capital returns from these investments.

Aim: to analyze the influence of macroeconomic indicators on capital returns in real estate and to propose a regression model for forecasting real housing prices in Bulgaria.

Tasks: clarification of basic concepts related to real estate and investment; analysis of direct and indirect investments; identification of statistically significant macroeconomic factors; development and validation of a regression forecasting model.

The research thesis states that macroeconomic factors affect direct and indirect investments differently, despite both being based on real estate. An additional hypothesis is the feasibility of constructing a forecasting model accounting for these differences.

The methodology includes deductive approach, comparative and statistical analysis, regression modeling and econometric tests (Granger causality, cointegration). Data from national and international institutions for the period 2005–2023 (direct investments) and 2007–2023 (indirect) were used.

Chapter One reviews the theoretical foundations of real estate and investment, specifics of direct and indirect investments, and the interaction of macroeconomic factors with asset prices. It highlights that developing economies, including Bulgaria, exhibit stronger dependence of real estate markets on macroeconomic conditions.

Chapter Two outlines the methodology. Ten key macroeconomic indicators are selected and compared between Bulgaria and the euro area, using econometric methods (Granger causality, cointegration, regression). The choice of indicators is justified and the procedure for validating results is described.



Chapter Three presents empirical findings on the relationships between capital returns of direct and indirect investments and macroeconomic factors. A regression model for short-term forecasting of housing prices in Bulgaria is developed, incorporating unemployment and construction output. The model is validated against data from countries that joined the euro area and used to forecast Bulgarian housing prices for 2024–2026.

The conclusion synthesizes the role of macroeconomic factors in Bulgarian real estate investments, highlighting specific national features and differences from developed economies. Theoretical and applied contributions include refinement of the definition of “real estate” as an investment asset, identification of factors with varying strength and direction of influence, and development of a forecasting model with practical applicability.

The dissertation plan adheres to the logical principles of epistemology, ensuring smooth transition from theory to methodology, empirical analysis, and conclusions. Content and exposition comply with Art. 27, para. 2 of the LDASRB Implementation Rules. The achieved objectives and solved tasks grant the research coherence, completeness, and originality.

#### 4. Evaluation of the Structure and Content of the Dissertation

The dissertation of Blagovest Plamenov Iliev fully complies with the formal and substantive requirements set out in Art. 27 of the Rules for the Implementation of the LDASRB and Art. 56 of the Rules for the Development of the Academic Staff at the University of Economics – Varna. The work contains scientific and applied results representing an original contribution to the field and demonstrates that the candidate possesses in-depth theoretical knowledge in the specialty as well as the ability to conduct independent research. The author addresses a real practical problem related to the impact of macroeconomic factors on real estate investment in Bulgaria.

Structurally, the dissertation is clearly organized and follows the logic of the research process – from justification of the topic and aims, through methodology and empirical analyses, to conclusions and proposals. Each chapter plays a specific role in achieving the objectives, with consistent and well-argued links between sections.

Chapter One reviews the theoretical foundations of real estate and investment. The author systematizes definitions and classifications, proposing a refined definition of “real estate” that includes both tangible and intangible assets subject to investment interest. The real estate market is analyzed as an “imperfect market” due to heterogeneity and low transparency. Types of investment – direct and indirect – are presented, with advantages, disadvantages, and the unique “specific risk” of real estate assets. The relationship between macroeconomic factors (GDP, inflation, unemployment, income, interest rates, etc.) and asset prices is analyzed, with differences drawn between developed and developing economies. An important finding is that macroeconomic factors influence direct and indirect markets differently, with particularly strong effects in Bulgaria.

Chapter Two presents the methodological foundations. Key macroeconomic and market indicators for 2005–2023 (direct) and 2007–2023 (indirect) are selected. A comparative analysis between Bulgaria and the euro area is carried out using institutional macroeconomic models (Indicator of Economic Activity in Bulgaria and Eurocoin). Methods applied include deduction, comparative analysis, statistical and econometric techniques, regression models, and Granger causality tests. The decision to focus on residential real estate as representative for direct investments and the BGREIT index for indirect ones is particularly significant. This framework provides a solid basis for empirical analysis and model building.



Chapter Three presents the empirical results. Granger causality tests establish statistically significant dependencies between macroeconomic factors and asset prices. A regression model is developed for real housing prices in Bulgaria, highlighting the role of income, inflation, and construction activity. The model is validated and used for short-term forecasts in the context of Bulgaria's expected euro area accession, predicting probable price increases. Final conclusions highlight differences between direct and indirect markets, confirming the research thesis and offering practical value for investors and institutions.

In terms of style, the work is characterized by scientific precision, clarity, and accurate terminology. The academic style is analytical and well-argued. Referencing is correct, and formatting of text and graphical materials is professional.

The author's abstract is fully consistent with the dissertation, adequately reflecting its aims, tasks, methods, results, and contributions without omissions or discrepancies.

In conclusion, the dissertation's structure and content meet all requirements for academic completeness and coherence, providing strong persuasiveness and evidential value of the findings.

## 5. Identification and Assessment of Scientific and Applied Contributions

I accept the contributions outlined by the candidate. To substantiate my final assessment, I decompose them into categories: theoretical, methodological, empirical, and practical-applied.

### Theoretical Contributions

A refined definition of "real estate" is proposed, encompassing tangible and intangible assets as objects of investment.

The classification of real estate is expanded through synthesis of legal, financial, and market aspects.

The real estate market is analyzed and argued to be "imperfect" due to asset heterogeneity and transaction specifics.

### Methodological Contributions

Selection of key macroeconomic indicators relevant to real estate investments in Bulgaria.

Comparative analysis between Bulgaria and the euro area using modern institutional indicators (IEA and Eurocoin).

Development and validation of a regression model for forecasting real housing prices in Bulgaria.

Application of Granger causality tests to identify relationships between macroeconomic factors and investment returns, a novelty in the Bulgarian context.

### Empirical Contributions

Detailed analysis of capital returns and risk in direct and indirect real estate investments in Bulgaria (2005–2023).

Identification of differences in the strength and direction of macroeconomic influences on direct and indirect markets, proving Bulgaria's stronger dependence on overall economic conditions.

Construction of a forecasting model for housing prices with validated short-term reliability.

### Practical Contributions

Conclusions and recommendations for investors, institutions, and public bodies in a changing macroeconomic environment.



Forecast of the impact of euro area accession on real estate prices, with practical value for business strategies and policy-making.

Results with applicability in education in real estate economics, investment, and macroeconomics.

Evaluation: The contributions are original, well-argued, and supported by empirical data and statistical methods. They enrich theory, provide methodological innovation, and have practical value.

#### 6. Publications and Participation in Scientific Forums

The dissertation is supported by publications authored by Blagovest Plamenov Iliev, directly related to its subject. They cover the theoretical foundations of real estate investment, the impact of macroeconomic factors, and empirical findings.

These publications are presented in reputable journals and scientific forums in economics and management. In terms of number, type, and content, they meet the minimum national requirements for awarding the educational and scientific degree "Doctor" (Art. 2b, paras. 2 and 3 of the LDASRB; Art. 57 of the Rules of UE–Varna).

Thus, the candidate's publications and scientific participation fully correspond to the dissertation's theme and confirm its academic and applied significance.

#### 7. Critical Remarks and Recommendations

The dissertation is comprehensive, academically rigorous, and convincingly argued. Nevertheless, several observations and recommendations may guide future development:

**Theory:** Although the literature review is broad, some recent international works (post-2022) could be included for greater topicality.

**Methodology:** The econometric analysis emphasizes regression and causality tests. Future research might employ modern techniques such as machine learning or panel data for additional perspectives.

**Formal:** The academic style is consistent, though some repetition of definitions could be reduced in future publications.

Overall, these remarks do not diminish the work's scientific value but highlight opportunities for further enrichment.

#### 8. Plagiarism and Academic Integrity Statement

In reviewing the dissertation, abstract, and related publications, no evidence of plagiarism or misuse of data has been identified.

Citations of other authors are correct and in line with academic standards. No cases of misattribution, unauthorized use of others' results, or data manipulation were found.

The dissertation fully complies with the ethical standards of academic integrity.

#### 9. Questions for the PhD Candidate

In your forecast regarding Bulgaria's euro area accession, which real estate market segments do you consider most vulnerable?



You apply logarithmic transformations to dependent and some explanatory variables. How did you address observations with zero or negative values, particularly in foreign direct investment flows?

Did you conduct a comparative analysis of model diagnostics before and after transformations (heteroskedasticity, normality of residuals, linearity)? What were your findings?

#### 10. Conclusion

The dissertation of Blagovest Plamenov Iliev is a completed scientific study on a timely and practically important issue. By its content, scope, and structure, it fully complies with the requirements of the LDASRB and its Implementation Rules for awarding the educational and scientific degree "Doctor".

The dissertation demonstrates a clear research concept, well-formulated aims and tasks, a sound methodology, and robust empirical implementation. Its findings are of both theoretical and practical significance in the fields of real estate investment and economic policy.

Based on the dissertation, the abstract, compliance with procedural requirements, and my personal impressions, I give a positive assessment of the dissertation "Impact of Key Macroeconomic Factors on Real Estate Investments in Bulgaria" and propose that its author, Blagovest Plamenov Iliev, be awarded the educational and scientific degree Doctor, in the scientific specialty "Economics and Management (Construction and Real Estate)" within Professional Field 3.8 "Economics".

Date: 19 August 2025

Reviewer:

(Prof. Dr. Georgi Zabunov)

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



## REVIEW

### of a dissertation for awarding the educational and scientific degree of "Doctor"

under a procedure announced by the University of Economics – Varna in professional field 3.8. Economics, doctoral programme "Economics and Management (Construction and Real Estate)"

#### 1. General Information

- review drawn up by: Assoc. Prof. Dr Todor Stoyanov Raychev, Department of Business, Investments, Real Estate (BIRE), University of Economics – Varna (UE – Varna), habilitated in professional field 3.8. Economics, academic specialty "Economics and Management (Innovations in Construction)"

- basis for writing the review: Order No ПД-06-91/29.05.2025, amend. by order No ПД-06-111/25.06.2025 by the Rector of UE – Varna appointing the members of the scientific examining jury and decision of the scientific examining jury from its first sitting held on 11.06.2025.

- **author of dissertation:** Blagovest Plamenov Iliev

- **topic of dissertation:** *Impact of Major Macroeconomic Factors on Investments in Real Estate in Bulgaria*

#### 2. Information about the Dissertation Defender

Blagovest Iliev completes his secondary education at the *First Language School – Varna*, studying English, during the period 1999 – 2004. He acquires his Bachelor Degree in Managerial Accounting at *Aston University*, a public University in Birmingham, England, in 2004 – 2008. He is awarded a Master Degree in Finance at *London City University*, England, in 2008 – 2009. After that he continues to build upon his education and in the period 2010 – 2013 studies at the *Institute of Chartered Accountants in England and Wales (ICAEW)* in London, acquires the qualification Chartered Certified Accountant and becomes a member of the Association of Chartered Accountants (ACA). During the same period 2010 – 2013 the dissertation defender begins his professional career in the sphere of financial audit at the headquarters of one of the leading consulting companies in the world: *Ernst & Young Ltd. (EY Limited)* in London, as an auditor, conducting financial audit of companies operating in the area of real estate, construction and hospitality. In 2014 he works at the global headquarters of *British Telecom group PLC (British Telecommunications Public Limited Company)* in London, in the sphere improvements and optimizations consultant, holding the position of "Consultant". From 2015 to 2022 he works as a manager at *InterBPI Limited* London. Since 2022 he has worked in construction and investment company *Build Investment OOD, Varna* as project manager in the sphere of real estate. As a result of the significant experience gained – both in leading foreign companies in London, and in this country – the dissertation defender has acquired valuable professional, organizational, social and research skills and competences, including skills and competences in the sectors of real estate and construction, directly related to the area of the doctoral programme and to the issues of the dissertation, respectively.

Dissertation defender Blagovest Plamenov Iliev is enrolled originally as a doctoral student in part-time form of study, state quota, in the area of higher education 3. "Social, Economic and Legal Sciences" in professional field 3.8. "Economics", doctoral programme "Economics and Management (Construction and Real Estate)" with the Department of BIRE of UE – Varna, as per order No ПД-17-272/05.07.2022 by the Rector of UE – Varna, for a



period of 4 years, effective from 01.09.2022 to 01.09.2026, and subsequently, based on order No РД-17-526/28.09.2022 by the Rector of UE – Varna, he is transferred to full-time form of study, state quota, effective from 19.09.2022 to 01.09.2025.

During the first year of his doctoral studies Blagovest Iliev successfully passes all four examinations in his individual doctoral study plan with excellent grades: on 11.11.2022 in English, grade: Excellent (6.00); on 23.02.2023 in Economics of the Enterprise, grade: Excellent (6.00); on 22.05.2023 in Property Development, grade: Excellent (5.50), and on 27.06.2023 in Methodology and Methods of Research, grade: Excellent (6.00), respectively.

At its meeting held on 13.05.2025 the Department Council of the Department of BIRE takes the decision to support the initiation of a procedure for the defense of the dissertation whose author is Blagovest Plamenov Iliev and proposes to the Faculty Council of the Faculty of Economics to consider and vote on the initiation of a procedure for the public defense of the dissertation. The doctoral student Blagovest Iliev presents a statement on the credits received during his training, whose total number is 140, whereas the required minimum is 130, as per the *Regulations on the Development of Academic Staff at the University of Economics – Varna* (RDASUEV). The same are confirmed by the scientific supervisor Assoc. Prof. Dr Bozhidar Chaparov and recognized by the Department Council.

Blagovest Iliev is disenrolled ahead of schedule with the right of defense and subsequent initiation of a procedure for awarding the educational and scientific degree of "Doctor", effective from 22.05.2025, as per order No РД-17-328/29.05.2025 by the Rector of UE – Varna.

### **3. General Description of the Dissertation**

My overall impression in respect of the thus presented in terms of type and volume dissertation is positive. In the *foreword*, very skillfully, the author's views are formulated and are set the essential aspects connected with the issues of research in the area of investments in real estate. The *relevance of the chosen topic* is determined by its importance for the individual investor, under conditions of a dynamic market environment predetermined also by the power and the direction of the impact of the main macroeconomic factors on asset price and the capital return on investment, so that they are able to assess preventively the benefit and the risk of investing at a particular moment in time in a particular property, and take a reasoned decision ensuring a profitable outcome of the investment decision in the short term and/or the long term.

In this regard direct and indirect investments in real estate in Bulgaria are pointed out as the *object of study*. As the *subject of study* is chosen the interaction between selected macroeconomic factors and asset prices, and, accordingly, the capital return on investment in real estate. It is from these that the author draws his *main research goal*: following an examination of the theoretical principles of investments in real estate, to select key macroeconomic indicators for an analysis of their influence on the capital return of the former, and put forward a regression model in order to forecast the actual prices of housing in Bulgaria. The *research thesis* of the dissertation contains the claim that there are differences between the macroeconomic factors, which have a statistical effect on asset prices with direct and indirect investments in real estate in Bulgaria during the considered time period, even though both types of investment are based on real estate. The *hypothesis* of the research work is that the macroeconomic factors which influence direct and indirect investments are different, although both kinds of investment are based on real estate. A *supplementary hypothesis* of the research work is that it is possible to design a model that computes the



impact of the factors in question on the prices of residential property and to forecast this market, in accordance with the macroeconomic trends, in a country-wide context.

The *methodology* of the research in the dissertation is selected correctly. It is aimed not only at achieving the goal and fulfilling the tasks of the research, but also at demonstrating the aptly defined research thesis and confirming the two working hypotheses. The author relies heavily on the use of *principal research methods* such as deduction, comparative analysis, empirical approach, statistical and mathematical analysis.

In the presented *constraints*, first of all the author specifies the elements of research interest, in order to make clear how he pairs the asset and its corresponding metric in the analyses found in the body, namely: on the one hand, the residential real property as an opportunity for direct investment and the index of the actual prices of dwellings, and on the other - the securities, issued by the SPV of the BSE, which constitute the possibilities for indirect investments in real estate in this country and the sectoral index BGREIT, reflecting the changes in their prices. Next, for objective considerations, the time periods for analysis of the main statistical data are also fixed: from 2005 to 2023 for the direct investment, and from September 2007 to 2023 for the indirect investment, respectively.

*In view of the above, I believe that the dissertation of Blagovest Iliev meets the requirements of Art. 27, Para. 2 of the Implementing Regulation of the Law on the Development of Academic Staff in the Republic of Bulgaria.*

#### **4. Assessment of the Structure and Contents of the Dissertation, Opinion on the Correctness of the Summary of the Dissertation and the Lexical and Stylistic Characteristics of the Text**

The presented dissertation constitutes an independently conducted, extensive monographical study. Its length is 182 pages and, in terms of structure, it comprises a Foreword (5 pgs), a Body of three Chapters (152 pgs), Conclusion (5 pgs) and Bibliography/References (13 pgs). The Bibliography contains 149 literature sources, of which 37 in Cyrillic, including normative documents, 79 in Latin, and 33 Internet sites, which shows good knowledge of the Bulgarian and the global scientific and specialized literature on the issues discussed in the body. In order to illustrate the information in the body there are worked out 56 tables and 19 figures, which correspond to the contents.

*Chapter One* examines theoretical issues of investments in real estate and their relation to major macroeconomic factors. The theoretical knowledge concerning real estate and its classifications is extended. The role and characteristics of real property items as investment assets are revealed. A refined definition of the concept of "real estate" is formulated. The specifics of the actual real estate market are drawn.

The theoretical foundations of investments and the kinds of investors, and in particular investments in real estate, are studied. The opportunities for realization of direct and indirect investments in real estate in Bulgaria are emphasized.

The leading role of the capital return on investment, determined by the prices of the investment assets, is highlighted. Attention is drawn to the risks of investing in real estate. The focus is on the macroeconomic factors, which are a major risk element affecting the attractiveness of the market at the national level and the performance of the investments.

Differences between the return and the risk of direct and indirect investments in real estate, including those in Bulgaria, are discovered, although both types of investment are based on real estate.

An assessment of research works, which explicitly demonstrate the interdependence between the markets of direct and indirect investments in real estate, and key macroeconomic



factors, determining economic activity, monetary policy and the levels of demand and supply on the markets, is made.

Differences between the strength and the direction of the influence among the various factors in the different countries and among the markets of direct and indirect investments are revealed. It is concluded that developing economies are distinguished for stronger interdependence between the performance of the markets and the economic situation in the country, as compared to the developed countries. The view that the differences in the markets and the economy at the national level necessitate the detailed study of a particular market in order to determine the specific interactions between the macroeconomic factors, and the performance of the markets for investments in real estate, is stated.

*Chapter Two* presents the methodology for conducting the empirical study in the dissertation. Based on an adaptation of three institutional macroeconomic models for Bulgaria and the euro area/Eurozone (Economic Activity Indicator, Eurocoin and Macroeconomic Model for the Assessment of Effects on Key Macroeconomic and Budget Indicators) and comparison with the results of studies considered in the third paragraph of Chapter One, are selected the following principal macroeconomic factors, for examining their interrelatedness with the indicators "Actual Prices of Dwellings" and "Indexes Reflecting Prices of the Securities of SPVs in Bulgaria (BGREIT) and the Real Estate Investment Trusts (REITs) in the euro area (NAREIT Eurozone)": GDP, inflation, unemployment, average monthly salary, the money supply in the economy (monetary aggregate M3), average annual percentage rate on mortgage loans, gross fixed capital formation in construction and production in the construction of buildings. The generalization is made that in the context of the adapted macroeconomic models the selected factors have a major significance and impact on the economy and the development of the markets for direct and indirect investments in real estate. From the conducted comparative analysis of the selected indicators for Bulgaria and the euro area it becomes clear that the economy of Bulgaria develops and integrates with the European economy ever more and more, which explains the similar trends in the changes in the examined market indicators. According to the author, the differences are largely due to the fact that the Bulgarian market and the Bulgarian economy are still developing. Those are typical not only in the regional context, but also between the markets of direct and indirect investments in Bulgaria. The author maintains the thesis that these differences between Bulgaria and the euro area, as well as the specific characteristics of the Bulgarian market, intensify the need for a more detailed study of the interrelation between the markets for residential property and SPV and the economic situation in this country.

On that basis a methodology, developed by the author, for performing an empirical study of the markets for direct and indirect investments in real estate, and their interrelation with the specified macroeconomic factors, is presented. In this way the emphasis is placed on the analysis of the prices of housing (actual prices of dwellings and indexes reflecting prices of the securities of SPV in Bulgaria (BGREIT) and the Real Estate Investment Trusts (REITs) in the euro area (NAREIT Eurozone)) by means of designing a regression model which substantiates the interrelation between them and the macroeconomic factors. By using complex statistical and mathematical tools and software for econometric research "EViews" an optimal regression equation is formulated, which helps to determine the reciprocal influence of the significant factors, as well as the impact of each one of them on the actual prices of the dwellings. The achievement of the best linear unbiased estimators in the regression model allows for its dependable use for forecasting the development of the actual prices of dwellings in this country in the short term.



*Chapter Three* examines the interrelatedness between the capital return on investment in real estate and the selected macroeconomic factors in Bulgaria. Once again, with the aid of complex statistical and mathematical tools and the software for econometric research "EViews" are conducted Granger causality tests (revealing short-term effects) and Johansen cointegration tests (looking for interrelatedness in the long term) between the prices of the residential property and the shares of SPV and the examined macroeconomic factors. A great number of interdependencies, typical of the market for direct investment and the market for indirect investments, are proven, not only in the long-term and the short-term aspect, but also in respect of the demand and supply in them. The main results of the study show that there exist differences between the two markets and their interrelation with the various macroeconomic indicators, which actually confirms the main hypothesis of the dissertation research.

Based on the results of the Granger causality tests for influence, the author proposes a regression model for determining the impact of the macroeconomic factors on the actual prices of dwellings. On the basis of the obtained results of the conducted numerous analyses the model is refined. The author concludes that from the factors under study, only the unemployment, the supply, and the development of the actual prices on the residential property market in Bulgaria are those, which have an impact on the actual prices of dwellings in the short term. Of those, the greatest influence on the actual prices of dwellings exerts the market itself, since 1% change in their past values from the previous quarter leads to 0.6% change in them in the next quarter.

A validation of the regression model is performed, according to which the said model ought to work most precisely with projections for the unemployment rate, the development of the construction sector in the country and the volume of its production. The more specific the projections on these macroeconomic factors, the more trustworthy the result of the model.

With the help of the model, a forecast of the actual prices of housing in Bulgaria, under the influence of the unemployment and the volume of production in construction for 2024, 2025 and 2026, is prepared. According to the forecast, the rate of unemployment in the country will be stable and will lead to a minimum effect on the actual prices of dwellings in the following years. According to the model, the growth in the construction sector is expected to cause a rise in the actual prices of the dwellings in this country by 0.6% in 2024, 0.41% in 2025 and 0.26% in 2026.

The *conclusion* sums up the attained results, which complement the finding, that the two working hypotheses are confirmed, respectively, the research thesis is defended, the goal set before the dissertation is accomplished, therefore the entire research work is completed successfully.

The author demonstrates in-depth knowledge in the area of investments in real estate, conducting statistical research and using software for econometric research. It is clear that he uses specific methodological tools competently and possesses excellent abilities to analyze empirical data and summarize the results.

*On the grounds of the findings given above, I think that in terms of structure and contents the dissertation conforms to the requirements of Art. 34, Para. 2 and Para. 3 of the RDASUEV, Section II – Terms and Procedure for Awarding the Educational and Scientific Degree of "Doctor".*

The *summary* is 36 pages long. The main contents include a general characterization of the dissertation, followed by an overview of the most substantial points of the conducted research. At the end, the contributions of the work and the publications on the topic are



presented. The summary satisfies, in terms of structure, contents and length, the mandatory requirements.

The dissertation is written in scholarly language. The *lexical characterization* stands out with the accuracy of the expressions and the specific terms, connected with the object of the study, which adds clarity and precision to the analysis. The *style* is concise, logically consistent and exact.

### **5. Identification and Evaluation of the Scientific as well as the Scientific and Applied Contributions in the Dissertation**

The presented statement on the contributions I estimate as correct and actually reflecting the theoretical and practical results achieved in the dissertation.

In my opinion, among those, the following types of contributions clearly stand out:

- *scientific and theoretical (the first contribution)* – the research focuses on the conceptual refinement and theoretical analysis of the concept of "real estate" in its role of an investment asset;

- *theoretical and methodological (the second and the fourth contribution)* – conducted is research, which presents a systematic approach to the understanding of macroeconomic indicators and institutional models and how they affect the investments in real estate in this country, and are compared the factors, influencing the prices of the investment assets in the short term and in the long term, as are highlighted the principal characteristics and differences between the market for direct investments and the market for indirect investments in real estate. As regards the *fourth contribution* – virtually a brand new regression model for analysis is developed and proposed;

- *scientific and applied (the third and the fourth contribution)* – the research work is practical in nature and focuses on data analysis and identification of correlations, highlighting the main characteristics and differences of the markets for direct and indirect investments in Bulgaria. As to the *fourth contribution* – actually we have the application of scientific results in order to solve practical problems – the developed regression model is used for the analysis of the macroeconomic factors, as a result of which are identified those which reciprocally affect the actual prices of housing in Bulgaria in the short term. The model is validated and used also to forecast the developments in the prices of housing during the period 2024 – 2026.

The presented theoretical and practical results constitute a significant author's contribution to science. They are an important step forward in the study of real properties as investment assets. Besides the profound theorization, they provide new analytical tools which can be used by practitioners. The analysis of the data on the prices of real estate and the identification of the main characteristics and differences in the markets for direct and indirect investments in Bulgaria are of particular importance to investors, who make financial decisions. Through the use of the created regression model for forecasting the prices of housing, real solutions to relevant economic issues are proposed.

### **6. Publications and Participation in Scientific Forums:**

Blagovest Iliev takes part in the procedure with a total of 3 independently written scientific publications reflecting essential points of the contents of the dissertation – 2 articles in English and 1 paper presented at an international scientific and practical conference, published in unreferenced journals with scientific reviewing and edited compilation volumes, specialized in the issues studied in the dissertation. *With this the dissertation defender meets the quantitative requirements under Art. 35, Para. 1, items 1-4 of the RDASUEV and satisfies*



*the minimum national requirements for awarding the educational and scientific degree of "Doctor", pursuant to Art. 26, Para. 2 and Para. 3 of the Law on the Development of Academic Staff in the Republic of Bulgaria.*

### **7. Ascertained or Unascertained Plagiarism in the Dissertation and the Summary**

Following an inspection performed using specialized software, *no evidence of plagiarism is found in the dissertation and the summary.* The literature sources, including the normative material, are used conscientiously in the body of the work. This is claimed also in the signed by the author and attached to the documentation for the defense procedure, *Declaration on Observance of Copyright Requirements*, with respect not only to them, but also to the originality of the dissertation and the publications thereto.

### **8. Critical Remarks and Recommendations**

During the development of the dissertation I have duly provided the dissertation defender Blagovest Iliev with critical remarks and recommendations, aimed at achieving high quality of the study, which is why I have no essential remarks on his work.

I would recommend that the dissertation defender should broaden his research on issues connected with the markets of direct and indirect investments in real estate in this country, and move towards professional development in academia.

### **9. Questions to the Dissertation Defender**

The issues under study elicit the following *questions to the dissertation defender*:

- Do you think that the choice of particular macroeconomic indicators is sufficient to predict, at a high level of credibility, potential changes in the levels of prices and investments in the sphere of real estate in this country, albeit in the short term?
- What considerations are taken into account in assessing the impact of the euro area/Eurozone on the prices of housing and how are those embedded in the regression model?
- What major recommendations would you direct at investors, based on the results of your research?

### **10. Conclusion**

The dissertation whose author is Blagovest Plamenov Iliev, on the topic of *Impact of Major Macroeconomic Factors on Investments in Real Estate in Bulgaria* is of high value and original applied research nature. It meets the requirements for independently written research work featuring theoretical and applied contributions. It contains important research findings and specific ideas of theoretical and practical nature. Taking into account the positive qualities of the dissertation, I believe that it fully satisfies the requirements and the criteria of the LDASRB, the RALDASRB and the *Regulations on the Development of Academic Staff at UE – Varna* for awarding the educational and scientific degree of "Doctor".

All this gives me reason to grant a positive evaluation to the dissertation and to move that the members of the esteemed scientific examining jury confer on the dissertation defender Blagovest Plamenov Iliev the educational and scientific degree of "Doctor" in professional field 3.8. Economics, doctoral programme "Economics and Management (Construction and Real Estate)".

20.08.2025  
Varna

Signature:

(Assoc. Prof. Dr Todor Raychev)

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