MASTER THESIS

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„The Bumpy Road to the Eurozone – a Comparative Study of the Economic Conditions of Bulgaria and Romania“

verfasst von/submitted by
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Pledge of Honesty

On my honour as a student of the Diplomatische Akademie Wien, I submit this work in good faith and pledge that I have neither given nor received unauthorized assistance on it.

Evelina Petcova

Contents

1. Abstract

The present Master Thesis represents a comparative analysis of the performance of Bulgaria and Romania in various economic indicators since their accession to the European Union. The author considers several economic and political criteria analyzed in the light of the Optimum Currency Area, and the economic and legal criteria related to the monetary integration of the European Union - the Eurozone. It is aimed to establish the level of similarity between the two countries and to make a reasonable assessment of whether both show a sufficient level of readiness and economic development to assume that they are ready to join a monetary union and that this would lead to even greater economic prosperity in the region. The author proves that in most of the criteria developed by the theory of the Optimum Currency Area, Bulgaria and Romania show significant similarities and satisfactory results. However, the criteria for European convergence lead to different conclusions.

Die vorliegende Masterarbeit stellt eine vergleichende Analyse der Wirtschaftsleistung Bulgariens und Rumäniens dar. Der Autor betrachtet verschiedene wirtschaftliche und politische Kriterien, die im Lichte der Theorie des optimalen Währungsraums analysiert wurden, sowie die wirtschaftlichen und rechtlichen Kriterien für der Währungsintegration der Europäischen Union – der Eurozone. Der Autor möchtet den Grad der Ähnlichkeit zwischen den beiden Ländern feststellen und eine vernünftige Einschätzung treffen, ob beide einen ausreichenden Grad an Bereitschaft aufweisen und wirtschaftliche Entwicklung davon auszugehen, dass sie bereit sind, einer Währungsunion beizutreten. Der Autor beweist, dass Bulgarien und Rumänien in den meisten Kriterien, die von der Theorie des optimalen Währungsraums entwickelt wurden, signifikante Ähnlichkeiten und zufriedenstellende Ergebnisse aufweisen. Die Kriterien für die europäische Konvergenz führen jedoch zu unterschiedlichen Schlussfolgerungen.

2. List of Abbreviations and Acronyms

ERM II	Exchange Rate Mechanism
OCA	Optimum Currency Area
EU	European Union
ECB	European Central Bank
EC	European Council
IMF	International Monetary Fund
NCB	National Central Bank
BNB	Българска Народна Банка – Bulgarian National Bank
BNR	Banca Naţională a României – Romanian National Bank
ECOFIN	Economic and Financial Affairs Council
GDP	Gross Domestic Product
TFEU	Treaty on the Functioning of the European Union
ESCB	European System of Central Banks
HICP	Harmonized Index of Consumer Prices
SGP	Stability and Growth Pact
EDP	Excessive Debt Procedure
BGN	Bulgarian lev

3. List of figures

4. Introduction

Title description

The title of the present Master Thesis is "The Bumpy Road to the Eurozone – a Comparative Study of the Economic Conditions of Bulgaria and Romania". The topic thus set reveals several essential specifics.

First, two member states of the European Union are indicated as the subject of the research. Second, each of the countries is at a different level of economic development - Bulgaria is in the "waiting room"[1] of the Eurozone - the Exchange Rate Mechanism /ERM II/- since 2020, and Romania is still far from adopting the euro. Third, the formulation of the topic as a comparative analysis between the two countries guarantees their equality in terms of research conducted and generated results – i.e., the focus of the author shall not be shifted towards greater examination of only one of them.

Thesis question and hypothesis

The thesis is addressing the enlargement of the Eurozone and the introduction of the Euro through analyzing the current economic conditions in different countries. In this sense, the concrete research question will be **in which way and to what extent the economic and legal similarities and differences between Bulgaria and Romania influence their path to the Eurozone**. The sub-questions of the thesis will be the following:

- What are the current economic conditions in Bulgaria and Romania in regard to the Optimum Currency Area criteria?
- What similarities and differences do the countries show in their economic conditions?

[1] Georgi Gotev, "*Bulgaria changes legislation to join euro 'waiting room'*", Euractiv, February 06, 2020, accessed December 21, 2020, https://www.euractiv.com/section/economy-jobs/news/bulgaria-changes-legislation-to-join-euro-waiting-room/

- Does it make sense from the perspective of the Optimum Currency Area theory for Bulgaria and Romania to join the Euro area?
- What are the economic conditions in Bulgaria and Romania in terms of the Maastricht convergence criteria and how did they develop from their accession to the European Union?
- What are the legal frameworks of the countries and to what extent are they compatible with the EU legislation? What steps should be taken in order to achieve the required compatibility?
- What are the differences and the similarities between the selected countries and how do they facilitate or hinder their accession procedure to the euro area?

It is hypothesized that **considering the current economic conditions and their development over time and despite the different monetary policies adopted, both Bulgaria and Romania show significant similarities to conclude that they both are ready to join a currency union, specifically – the Eurozone, and it would be economically rational and beneficial for both of them to adopt the euro**.

The study is taking a combination of quantitative and qualitative approach with comparative and inter-disciplinary elements by examining the specific legal, financial, and economic indicators of the mentioned countries before adopting the Euro, and the particular economic obstacles for each of them in the prospect of joining a currency area.

Purpose and relevance of the study

The purpose of the present master thesis is to make a detailed comparative analysis of the selected countries in the context of fulfilling certain economic criteria and to provide possible theoretical explanations of how and to what extent the economic and legal settings of each country affects and determines the process of joining the Euro area by facilitating or hindering it. Taking into account the identical conditions that must be met by all EU Member States in terms of economic integration and the specific conditions of the Optimum Currency Area, the comparative analysis focuses on both the similarities and differences in the individual process of adopting the

euro in both countries. It is hypothesized that, in terms of economical rationality and readiness, both countries show a significant degree of similarity, despite their different monetary policies.

The author believes that the topic is relevant and should be explored for several reasons. On the one hand, the enlargement of the Eurozone is an unfinished, continuing process, as, at present, not all Member States of the European Union are members of the Eurozone. On the other hand, the European institutions, in particular, the European Central Bank and the European Commission, continue to regularly examine the progress made by countries in the fulfillment of the criteria that would lead to their accession to the Eurozone[2] / the so-called Convergence Reports[3]/. In 2020, after the last report, an agreement was reached for the accession of Bulgaria and Croatia to the ERM II[4], which significantly increases the possibility of the following adoption of the euro in the next couple of years. Romania, on the other hand, also plans to join 2024[5]. Last but not least, the OCA theory and its concept of monetary unions continues to be relevant and researched in the modern globalized world.

Consequently, the topic is sufficiently relevant and up to date while insufficiently analyzed in view of recent events and the ongoing developments. The significance of the topic is further evident as its research will contribute to the enrichment of the literature in the field, as well as will enable subsequent research.

[2] Treaty on the Functioning of the European Union, Official Journal of the European Union, C 326, vol. 55, October 26, 2012

[3] "Convergence Report", European Central Bank, June 2020, accessed December 15, 2020, https://www.ecb.europa.eu/pub/pdf/conrep/ecb.cr202006~9fefc8d4c0.en.pdf; "Convergence Report 2020", European Commission, Economic and Financial Affairs, June 10, 2020, accessed December 15, 2020, https://ec.europa.eu/info/publications/convergence-report-2020_en

[4] "Communiqué on Bulgaria", European Central Bank, July 10, 2020, accessed January 10, 2021, https://www.ecb.europa.eu/press/pr/date/2020/html/ecb.pr200710~4aa5e3565a.en.html?utm_source=ecb_twitter&utm_medium=social&utm_campaign=20200710_PR_ECBBulgaria

[5] "Romania and the Euro", Economic Commission, accessed January 10, 2021, https://ec.europa.eu/info/business-economy-euro/euro-area/euro/eu-countries-and-euro/romania-and-euro_en

5. Methodology

The methodology includes an analytical and a comparative approach in an interdisciplinary manner, encompassing both fields of economics and law. The master thesis includes a combination of qualitative and quantitative measures in order to achieve a better understanding of the research question and to make satisfactory conclusions. The empirical part of the Thesis based on the conducted analysis makes it possible to draw adequate conclusions on the similarities and differences of the economic integration process in regard to Bulgaria and Romania.

Observational empirical research is conducted in order to measure the extent to which the dependent variable – the decision to join the Eurozone, is influenced by the independent variables – in this case, the economic and legal conditions of Bulgaria and Romania and their similarities. The data used for analyzing and comparing the countries is deducted from various institutional reports and economic information platforms and is put in a specific context in order to be compatible with the chosen direction of research.

With a view to setting a time frame for the analysis, namely - preceding the accession of the countries to the Eurozone, relevant empirical data is observed until 2020 (the year of the last report of the official institutions at the time of submission of the Thesis). In view of the simultaneous accession of Romania and Bulgaria to the European Union, as well as the fact that both have not yet adopted the Euro, although Bulgaria has recently joined the ERM II, their accession to the EU in 2007 will be considered the starting date for the examination.

To obtain more reliable and well-tested results, the comparative analysis of the countries is performed after the completion of the individual study of each of them. To acquire sharper results from an international perspective, indicators of both countries are compared with those of other Member States of the European Union preceding their adoption of the euro – such as Estonia, Croatia, and Hungary, as well as to the existing EU and Euro area average estimates, when applicable. The comparative approach helps to identify similarities and/or differences in the accession process of the countries from which significant conclusions are drawn in relation to the chosen research question.

6. Literature review

Although from the first steps towards greater economic consolidation within the European Union have passed slightly more than 40 years[6], the topics of the European Economic Integration and the Economic and Monetary Union are considered a central object of study by many economists, lawyers, and other scientists. The European Union, as well as its economic aspects, are popular and deeply studied topics, due to which the academic literature in the field is infinite. Prominent scholars such as Paul de Grauwe[7], Jacques Pelkmans[8], Richard Baldwin[9], Mike Artis and Frederick Nixson[10], Joseph Stiglitz[11], and others have dedicated their publications to explaining the concept of European economic integration and its historical development. Studies have been made and published on the nature of the euro area, its stability and usefulness, its connections to the Optimum Currency Area, its resilience to all kinds of exogenous and endogenous shocks, and even attempts have been made to predict its future. Undoubtedly, however, the enlargement of the euro area is an ongoing and evolving process, and with each passing year, there is new data for interpretation and various conclusions.

The applied economic theory for the purposes of the present Thesis is the one of the Optimum Currency Area. According to Francesco Paolo Mongelli, the OCA is defined as "the optimal geographic domain of a single currency, or of several currencies, whose exchange rates are irrevocably pegged and might be unified."[12] The theory suggests that, under the completion of certain conditions, the benefit from the common currency is greater than the cost, in which case the country should form or enter a monetary union with a common currency[13]. At the same time, choosing the right timing for joining a monetary union is critical for keeping the macroeconomic

[6] Paul R. Krugman et al., "*International Economics. Theory and Policy*", 11th Edition, Pearson, 2018, pp. 683-690
[7] Paul de Grauwe, "*Economics of Monetary Union*", 12th Edition, Oxford University Press, 2018
[8] Jacques Pelkmans, "*European Integration. Methods and Economic Analysis*", 3rd Edition, Pearson Education, 2006
[9] Richard Baldwin and Charles Wyplosz, "*The Economics of European Integration*", 6th Edition, McGraw-Hill Education, 2020
[10] Mike Artis and Frederick Nixson, "*The Economics of the European Union. Policy and Analysis*", 4th Edition, Oxford University Press, 2007
[11] Joseph E. Stiglitz, "*The Euro. How a Common Currency Threatens the Future of Europe*", W. W. Norton & Company, 2016
[12] Francesco Paolo Mongelli, "*'New' Views on the Optimum Currency Area Theory: What is EMU Telling Us*?", ECB Working Paper Series, Working Paper No. 138, April 2002
[13] Kurt A. Hafner and Jennifer Jager, "*The Optimum Currency Area Theory and the EMU*", Intereconomics, Volume 48, Number 5, 2013, pp. 315–322

stability of the country[14].The OCA theory continues to grow and develop ever since it was first introduced by Mundell in the 1960s[15], and scholars find more and more criteria that could be considered by the governments when deciding whether to introduce a common currency[16]. Part of the relevant literature regarding the OCA criteria is examined in further detail in the next chapters.

As the process of European economic integration is not exclusively an economic and fiscal issue but also a legal one, the examination of the legislation in the field is crucial for gaining further knowledge of the legal convergence and the possible implications in entering the Eurozone. The relevant legal literature is comprised of primary and secondary legislation of the EU. The provisions of the Treaty on the Functioning of the European Union[17] (hereinafter referred to as "the Treaty") are of utmost importance for understanding the legal framework of the EU and the specific requirements for a thorough legal convergence for the Member Countries, thus its related Articles are examined and explained in detail in Chapter 8. The legal literature used for the purpose of this Thesis also includes various Regulations, Decisions and Reports of the European institutions. The national legislation of Bulgaria and Romania and its compatibility with the European legal framework are also reviewed.

Last but not least, information on the current economic and legal conditions of the selected countries, on the basis of which the comparative analysis is made, is obtained from official reports from the ECB, the EC, the IMF, and other reliable data from economic information platforms, which allows for reasonable and justified assumptions about the similarities and differences between the studied countries in economic and legal terms. In view of the possible complexity and incomprehensibility of the data studied, as well as the further confirmation or rejection of possible findings, secondary sources at the local level such as economic periodicals are also consulted.

The author believes that this Thesis will contribute to the existing literature by providing an understandable framework of the similarities and differences of Bulgaria and Romania in the

[14] Martin Hudec, "*A Search for an Optimum Currency Area*", Studia Commercialia Bratislavensia, Volume 11, Number 39, January 2018, p. 79
[15] Robert A. Mundell, "*A Theory of Optimum Currency Areas*", The American Economic Review, Vol. 51, No. 4 (Sep., 1961), pp. 657-665
[16] Oleksandra Stoykova, "*Optimum Currency Areas: Theories and Applications*", Myśl Ekonomiczna i Polityczna, 4(63), 2018, accessed February 20, 2021, https://mysl.lazarski.pl/en/economic-and-political-thought-online/issues/2018/issue4/
[17] Treaty on the Functioning of the European Union, OJ C 326, October 26, 2012, pp. 47-390

process of joining the Eurozone. Many scholars have focused their efforts on studying and analyzing the concept of the OCA theory and the convergence criteria of the Eurozone. However, to the knowledge of the author, no such interdisciplinary academic work, focusing on the comparison of the mentioned countries and their economic and legal specifics, taking into account the events of 2020, has been published so far. In this sense, the present Master Thesis will help not only for a better understanding of the topic in a territorial aspect but will also contribute to the development of literature in the field.

7. Theoretical framework – economics

The Optimum Currency Area (OCA) theory

The theoretical part of the Thesis acknowledges that "There exists neither a measure which will definitely indicate whether countries should or should not form a monetary union nor even a unique definition for the concept of the Optimum Currency Area."[18] Even so, in the modern globalized world, there are still countries who wish to form or join a monetary union. Regionally focusing on Europe, the Member States of the EU sooner or later join the Eurozone and become a part of the EMU. The existing literature is overwhelmed with considerations of whether the Euro area forms an OCA or not, but it is a form or a currency union that needs to be analyzed and evaluated in detail. In order to do so, however, first we need to understand the concept of the OCA theory.

The first economist to develop the theory of an Optimum Currency Area in the 1960s is Robert Mundell, according to whom "the Optimum Currency Area is a region where no fiscal or monetary intervention is needed to bring the economy back to its equilibrium."[19] Considering that the OCA is practically a certain group of countries sharing a common currency, i.e., not having an internal exchange rate between them, Mundell suggests that the latter can be replaced by a high

[18] Oleksandra Stoykova, "*Optimum Currency Areas: Theories and Applications*", Myśl Ekonomiczna i Polityczna, 4(63), 2018, accessed February 20, 2021
[19] R.A. Mundell, "*A Theory of Optimum Currency Areas*", American Economic Review, Vol. 51, No. 4, 1961, pp. 657-665; Oleksandra Stoykova, "*Optimum Currency Areas: Theories and Applications*", Myśl Ekonomiczna i Polityczna, 4(63), 2018, accessed February 20, 2021

degree of labor mobility - "labour mobility across the region is one of the most essential factors for currency area to be optimal … high labor mobility allows two regions to be economically efficient under the common monetary policy"[20]. The second criterion developed by Mundell is the absence of asymmetric shocks among the participating countries.[21]

After Mundell's discovery of this theory, many other prominent economists have added other criteria under which fulfilment, the countries should form a currency union. Ronald McKinnon divides and elaborates Mundell's labor mobility criterion into 2 essential parts – "geographical factor mobility among regions and factor mobility among industries" and suggests another criterion for forming an OCA to be the high degree of openness of the economy[22]. He also stresses that the size of the countries may determine the future in a currency union, as "small economies are more suitable for currency union than large ones."[23] Peter Kenen continues formulating the OCA theory by adding a product diversification criterion, suggesting that "a highly diversified economy with highly diversified export is less likely to suffer from shocks."[24] Kenen also advocated that the similarity of production structure and regional fiscal integration are key indicators of the applicability of OCA[25]. Corden, considering the loss of national monetary policy when forming a currency union, supports Mundell in the importance of price and wage flexibility as adjusting mechanisms, and agrees with Fleming that the countries should have, inter alia,

[20] Ibid.
[21] R.A. Mundell, "*A Theory of Optimum Currency Areas*", American Economic Review, Vol. 51, No. 4, 1961, pp. 657-665; Francesco Paolo Mongelli, "*'New' Views on the Optimum Currency Area Theory: What is EMU Telling Us*?", ECB Working Paper Series, Working Paper No. 138, April 2002
[22] R.I. McKinnon, "*Optimum Currency Areas*", American Economic Review, Vol. 53, No. 4, 1963, pp. 717-725; Oleksandra Stoykova, "*Optimum Currency Areas: Theories and Applications*", Myśl Ekonomiczna i Polityczna, 4(63), 2018, accessed February 20, 2021
[23] Ibid.
[24] P.B. Kenen, "The Theory of Optimum Currency Areas: An Eclectic View", in R.A. Mundell, A. Swoboda (eds.): "*Monetary Problems of the International Economy*", Chicago 1969, University of Chicago Press, pp. 41-60; Francesco Paolo Mongelli, "*'New' Views on the Optimum Currency Area Theory: What is EMU Telling Us*?", ECB Working Paper Series, Working Paper No. 138, April 2002
[25] P.B. Kenen, "The Theory of Optimum Currency Areas: An Eclectic View", in R.A. Mundell, A. Swoboda (eds.): "*Monetary Problems of the International Economy*", Chicago 1969, University of Chicago Press, pp. 41-60; Oleksandra Stoykova, "*Optimum Currency Areas: Theories and Applications*", Myśl Ekonomiczna i Polityczna, 4(63), 2018, accessed February 20, 2021

comparable inflation levels.[26] In his second paper on this topic, Mundell considers the importance of "assets' differentiation." [27]

In 1998, Frankel and Rose present the theory of Endogeneity of the OCA criteria, implying that even the dynamics of the currency union will eventually lead to the fulfillment of the criteria after entering the union, even if they are not fulfilled ex-ante[28]. This idea can be related to the economic concept of self-fulfilling expectations, inferring that "A decision by an individual country to join EMU, even if it does not satisfy the OCA criteria, would have a self-fulfilling character."[29]

In the light of the European monetary integration, the OCA theory reappears as a topic of interest in the 1980s.[30] The so-called "second wave" of the OCA theory scholars take a different approach and focus on the costs and benefits of losing a country's monetary policy when deciding upon its fitness to join a currency union. In his article, Tavlas[31] summarizes the most important benefits and costs of joining an OCA.[32]

Undoubtedly, upon deciding whether to give up its national currency and monetary policy, every country is conducting a detailed cost-benefit analysis and is joining the OCA only if the benefits of the union exceed the costs. Paul De Grauwe implies that "Eliminating national currencies and moving to a common currency can be expected to lead to gains in economic activity."[33] These gains can be direct – elimination of transaction costs, or indirect, such as price transparency leading to increased competition and deeper financial integration[34], welfare gains from less uncertainty due to the elimination of the exchange rate between the union countries[35],

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[26] W. M. Corden, "*Monetary Integration, Essays in International Finance*", 1972, International Finance Section No. 93, Princeton University, Department of Economics; Oleksandra Stoykova, "*Optimum Currency Areas: Theories and Applications*", Myśl Ekonomiczna i Polityczna, 4(63), 2018, accessed February 20, 2021
[27] Robert A. Mundell, "Uncommon Arguments for Common Currencies", 1973, in H.G. Johnson and A.K. Swoboda, "*The Economics of Common Currencies*", Allen and Unwin, pp.114-32
[28] Jeffrey A. Frankel and Andrew K. Rose, "*The Endogeneity of the Optimum Currency Area Criteria*", The Economic Journal, Vol. 108, No. 449, July 1998, pp. 1009-1025
[29] Paul de Grauwe, "*Economics of Monetary Union*", 12th Edition, Oxford University Press, 2018, p. 90
[30] Francesco Paolo Mongelli, "*'New' Views on the Optimum Currency Area Theory: What is EMU Telling Us*?", ECB Working Paper Series, Working Paper No. 138, April 2002
[31] George S. Tavlas, "*Benefits and Costs of Entering the Eurozone*", Cato Journal, Volume 24, p.89–106 (2004)
[32] Ibid.
[33] Paul de Grauwe, "*Economics of Monetary Union*", 12th Edition, Oxford University Press, 2018, p. 55
[34] Ibid., p. 56
[35] Ibid., pp.60-61

more capital accumulation due to the decrease of the interest rate[36], and a long-term improvement of the international trade[37]. Another important benefit of joining an OCA is the credibility and reliability of the adopted international currency, which stimulates domestic financial markets[38].

The magnitude of the costs, on the other hand, are mostly related to the structural and institutional differences of the countries. The most important cost that comes with the adoption of a common currency is the surrendering of the national monetary policy to the hands of a union central bank[39]. In this case, the absence of labor mobility and flexible wages and prices might lead to difficulties in the adjustment to asymmetric demand shocks. Of course, even in a currency union, certain policies are left at national discretion – such as taxing and spending powers, and fiscal policy. The latter, however, sometimes seems to be insufficient to stabilize the economy, especially in times of distrust of the financial markets[40]. Lastly, the legal differences of the participating countries and the level of completeness of the monetary union should also be considered ("A combination of monetary and political union is more likely to have fewer costs and therefore to function better than monetary unions that are not embedded in a political union"[41]).

As the OCA theory continues to be researched, reexamined, and further developed, many other criteria have been developed in recent years and still are being advocated by scholars. In this thesis, the author considers only few of them, which appear most relevant for the current analysis. By examining the selected criteria and comparing the results with the theoretical framework, it becomes clear whether Bulgaria and Romania are suitable to form a currency union, or, respectively, to join the Eurozone.

[36] Ibid., p.64
[37] Ibid., pp.68-69
[38] Ibid., pp.69-70
[39] Ibid., p. 7
[40] Ibid., p. 10
[41] Ibid., pp.83-84

8. Theoretical framework – law

Legal convergence

The integration in the Member States with a derogation in the Eurosystem requires a certain extent of not only economic but also a legal unification. In the Convergence reports conducted by the EC and the ECB as described in Art. 140 of the Treaty, in addition to assessing the economic performance of countries, the institutions also make an "examination of the compatibility between the national legislation of each Member State with a derogation, including the statuses of its NCB, and Articles 130 and 131 of the Treaty and the relevant Articles of the Statute."[42]

The assessment of whether the countries fulfil the criterion of legal convergence is composed of several elements. First, the compatibility of the national legislation with Art. 131 of the Treaty is examined. The Article stipulates that "*Each Member State shall ensure that its national legislation including the statutes of its national central bank is compatible with the Treaties and the Statute of the ESCB and of the ECB.*"[43] Thus, an overall evaluation of the national legislation on its NCB is conducted in order to determine and advise on the amendment of the potential departures from the requirements of the Treaties, the Statute, and the secondary EU legislation: "national legislation that is incompatible with secondary EU legislation relevant for the areas of adaptation examined … should be brought into line with such secondary legislation."[44] The adaptation of the national legislation is left at the discretion of the Member States, who can determine whether to refer directly to the relevant provisions of the Treaties and the Statutes, to incorporate their provisions, or to amend the incompatible legislation otherwise. [45] Furthermore, Art. 127 (4) of the Treaty requires the ECB to be consulted "*by national authorities regarding any draft legislative provision in its fields of competence, but within the limits and under the conditions*

[42] "Convergence Report", European Central Bank, June 2020, accessed December 15, 2020, p. 18
[43] Article 131, Treaty on the Functioning of the European Union, Official Journal of the European Union, C 326, vol. 55, October 26, 2012
[44] "Convergence Report", European Central Bank, June 2020, accessed December 15, 2020, p. 19
[45] Ibid.

set out by the Council in accordance with the procedure laid down in Article 129(4)."[46] This provision is reinforced in the Council Decision 98/415/EC of 29 June 1998[47].

A crucial element of the legal convergence of the countries is the independence of their NCBs, composed of various requirements: functional, institutional, personal, and financial independence, each of which is examined separately.[48]

Regarding the institutional independence, Article 7 of the Statute requires that "*When exercising the powers and carrying out the tasks and duties conferred upon them by the Treaties and this Statute, neither the ECB, nor a national central bank, nor any member of their decision-making bodies shall seek or take instructions from Union institutions, bodies, offices or agencies, from any government of a Member State or from any other body.*"[49] The rationale behind this requirement is that "Whether an NCB is organized as a state-owned body, a special public law body or simply a public limited company, there is a risk that influence may be exerted by the owner on its decision-making in relation to ESCB-related tasks by virtue of such ownership. Such influence, whether exercised through shareholders' rights or otherwise, may affect an NCB's independence…"[50] Moreover, the Treaty and the Statute prohibits the rights of third parties to give any kind of instructions or influence the decision-making process of the NCB in any manner,[51] including a prohibition on approving, suspending, annulling, or deferring the decisions of the NCBs, prohibition on censoring decisions of the NCBs on legal grounds, prohibition on the participation of third parties in decision-making bodies of an NCB, and prohibition on obligatory consultation related to an NCB's decision.[52]

Regarding personal independence, Article 14 of the Statute requires a minimum duration of the term of office for the Governor of the NCB of five years and elaborates on the specific

[46] Article 127, Treaty on the Functioning of the European Union, Official Journal of the European Union, C 326, vol. 55, October 26, 2012
[47] Council Decision 98/415/EC of 29 June 1998 on the consultation of the European Central Bank by national authorities regarding draft legislative provisions
[48] "Convergence Report", European Central Bank, June 2020, accessed December 15, 2020, p. 20
[49] Article 7, Consolidated version of the Treaty on the Functioning of the European Union. Protocol (No 4) On The Statute Of The European System Of Central Banks And Of The European Central Bank, OJ C 202, 2016
[50] "Convergence Report", European Central Bank, June 2020, accessed December 15, 2020, p. 22
[51] Article 7, Consolidated version of the Treaty on the Functioning of the European Union. Protocol (No 4) On The Statute Of The European System Of Central Banks And Of The European Central Bank, OJ C 202, 2016
[52] "Convergence Report", European Central Bank, June 2020, accessed December 15, 2020, p.22-23

procedure and grounds for relieving him from office.[53] It is important to note, however, that "The provisions of Article 14.2 of the Statute are not restricted to the security of tenure of office to Governors, and Article 130 of the Treaty and Article 7 of the Statute refer to 'members of the decision-making bodies' of NCBs, rather than to Governors specifically. This applies in particular where a Governor is "first among equals" with colleagues with equivalent voting rights or where such other members are involved in the performance of ESCB-related tasks."[54]

Financial independence of the NCBs requires that "Member States may not put their NCBs in a position where they have insufficient financial resources and inadequate net equity to carry out their ESCB or Eurosystem-related tasks … but also its national tasks."[55] In this sense, the NCBs shall always have a sufficient amount of resources at their disposal in the view of their national and international obligations.[56] This criterion is evaluated through the possibility of external influence on the ECB by third parties regarding the availability of the required financial resources. Such external influence may be conducted through the determination of budget, the national accounting rules, the distribution of public allocations, financial liability for supervisory authorities, limited autonomy in staff matters, and ownership and property rights[57].

The legal compatibility of provisions regarding confidentiality, are regulated in Article 37 of the Statute. The requirement for professional secrecy is applicable to the banks' staff and other persons with access to sensitive data even after the termination of their duties.[58]

Another legal compatibility requirement examined in the Convergence reports is the prohibition on monetary financing, specified in Article 123 of the Treaty, which also points out the exceptions from "*any financing of the public sector's obligations vis-à-vis third parties*"[59] The fulfilment of this criterion appears to be crucial in achieving the main objective of price stability, as well as for the fiscal discipline of the Member States' governments. It is specifically expressed that "In cases where national legislative provisions mirror Article 123 of the Treaty or Regulation

[53] Article 14, Consolidated version of the Treaty on the Functioning of the European Union. Protocol (No 4) On The Statute Of The European System Of Central Banks And Of The European Central Bank, OJ C 202, 2016
[54] "Convergence Report", European Central Bank, June 2020, accessed December 15, 2020, p. 25
[55] Ibid., p. 26
[56] Ibid., p. 26-27
[57] Ibid., p. 27-29
[58] Article 37, Consolidated version of the Treaty on the Functioning of the European Union. Protocol (No 4) On The Statute Of The European System Of Central Banks And Of The European Central Bank, OJ C 202, 2016
[59] "Convergence Report", European Central Bank, June 2020, accessed December 15, 2020, p. 30

(EC) No 3603/93, they may not narrow the scope of application of the monetary financing prohibition or extend the exemptions available under EU law."[60] Furthermore, "National legislation may not require an NCB to finance either the performance of functions by other public sector bodies or the public sector's obligations vis-à-vis third parties. This equally applies to the conferral of new tasks upon NCBs" and thus the breach of the monetary financing prohibition.[61] The Convergence reports set in detail a list of tasks which, under EU legislation, are considered to be government tasks and shall not be conferred on NCBs.[62]

The requirements for legal convergence further restrict the NCBs "to take over the liabilities of a previously independent public body, as a result of a national reorganization of certain tasks and duties (…), without fully insulating the NCB from all financial obligations resulting from the prior activities of such a body."[63] The obtainment of approvement by the NCB from the government prior taking resolution actions and the payment of compensation for damages by the NCB under the assumption of public sector liabilities are also prohibited. Further, the Statute regulates prohibition on privileged access by third parties to any measures not based on "*prudential considerations*", defined by Article 2 of Regulation (EC) No 3604/93 as "*those who underlie national laws, regulations or administrative actions based on, or consistent with, EU law and designed to promote soundness of financial institutions so as to strengthen the stability of the financial system as a whole and the protection of the customers of those institutions*."[64]

Article 131 of the Treaty requires further investigation of the legal integration of NCBs into the Eurosystem. In this sense, the full legal integration of the Member States with a derogation is examined through the compatibility of economic policy objectives (Article 2 of the Statute), tasks of the NCBs (including monetary policy instruments, monitoring of fiscal developments, rules on liquidity problems, the right to issue banknotes, foreign reserve management, and statistics), financial provisions (including rules on financial accounts, auditing, capital subscription, transfers of foreign reserve assets, and allocation of monetary income), exchange rate

[60] "Convergence Report", European Central Bank, June 2020, accessed December 15, 2020, p.31
[61] Ibid.
[62] Ibid., p.32
[63] Ibid., p. 33
[64] Ibid,, p.39

policy (Articles 138 and 219 of the Treaty), and international cooperation (Article 6 of the Statute).[65]

It is important to mention that "The requirement for national legislation to be 'compatible' does not mean that the Treaty requires 'harmonization' of the NCBs' statutes, either with each other or with the Statute. National particularities may continue to exist to the extent that they do not infringe the competence in monetary matters that is irrevocably conferred on the EU."[66]

Relevant Treaties and Statutes

As already expressed above, the assessment of the compatibility of the national legislation of the Member States with a derogation with the EU regulations is conducted mainly through evaluating the extent to which national legal frameworks are in line with Article 130 and Article 131 of the Treaty. Considering the multitude of the evaluated areas, other provisions of the Treaty such as Article 3, Article 108, Article 123, Article 124, Article 127, Article 128, Article 138, Article 139, Article 219, and Article 282[67] are considered to be relevant and are being referred to.

In addition to the Treaty, a reference point for comparing the legal frameworks are the provisions of the Statute of the European System of Central Banks and of the European Central Bank, implemented in Protocol (No 4) of the Treaty.[68]

The Convergence reports also rely on relevant secondary sources of EU law such as Regulation (EC) No 3603/93[69], Regulation (EC) No 3604/93[70], Council Decision 98/415/EC[71],

[65] "Convergence Report", European Central Bank, June 2020, accessed December 15, 2020, pp. 38-43
[66] Ibid.
[67] Treaty on the Functioning of the European Union, Official Journal of the European Union, C 326, vol. 55, October 26, 2012
[68] Consolidated version of the Treaty on the Functioning of the European Union. Protocol (No 4) On The Statute Of The European System Of Central Banks And Of The European Central Bank, OJ C 202, June 7, 2016, p. 230–250
[69] Council Regulation (EC) No 3603/93 of 13 December 1993 specifying definitions for the application of the prohibitions referred to in Articles 104 and 104b (1) of the Treaty, OJ L 332, December 31, 1993, pp. 1–3
[70] Council Regulation (EC) No 3604/93 of 13 December 1993 specifying definitions for the application of the prohibition of privileged access referred to in Article 104a of the Treaty, OJ L 332, December 31, 1993, p. 4–6
[71] 98/415/EC: Council Decision of 29 June 1998 on the consultation of the European Central Bank by national authorities regarding draft legislative provisions, OJ L 189, July 3, 1998, pp. 42–43

Council Regulation (EC) No 1009/2000[72], Deport Guarantee Schemes Directive[73] and Investor Compensation Schemes Directive[74], and Council Regulation (EC) No 974/98[75].

Regarding the Member States with a derogation, the assessment of legal convergence is focusing on the relevant national legislation. In the case of Bulgaria, such are the Bulgarian Constitution[76], the Law on Българска Народна Банка (Bulgarian National Bank, hereinafter referred to as "the Law on BNB")[77], the Law on the prevention and disclosure of conflicts of interests[78], and the Law on counter-corruption and unlawfully acquired assets forfeiture (hereinafter referred to as "The law on counter-corruption)[79].

In Romania, the relevant provisions are situated in Law No 312/2004 on the Statute of Banca Naţională a României (hereinafter referred to as the "Law on BNR)[80] and Ordinance on the statutory audit of the annual financial statements and consolidated annual financial statements.[81]

9. Empirical model

9.1. OCA criteria

Labor mobility

Robert Mundell, referred to as the father of the OCA theory and the euro,[82] develops the idea that the mobility of the factors of production, particularly the mobility of labor, is of crucial

[72] Council Regulation (EC) No 1009/2000 of 8 May 2000 concerning capital increases of the European Central Bank, OJ L 115, May 16, 2000, p. 1-1
[73] Directive 2014/49/EU of the European Parliament and of the Council of 16 April 2014 on deposit guarantee schemes Text with EEA relevance, OJ L 173, June 12, 2014, pp. 149–178
[74] Directive 97/9/EC of the European Parliament and of the Council of 3 March 1997 on investor-compensation schemes, OJ L 84, March 26, 1997, pp. 22–31
[75] Council Regulation (EC) No 974/98 of 3 May 1998 on the introduction of the euro, OJ L 139, May 11, 1998, p. 1–5
[76] Constitution of the Republic of Bulgaria, Darjaven vestnik issue 56, July 13, 1991
[77] Law on Българска Народна Банка (Bulgarian National Bank), Darjaven vestnik issue 46, June 10, 1997
[78] Law on the prevention and disclosure of conflicts of interests, Darjaven vestnik issue 94, October 31, 2008
[79] Law on counter-corruption and unlawfully acquired assets forfeiture, Darjaven vestnik issue 7, January 19, 2018
[80] Law No 312/2004 on the Statute on the Banca Naţională a României, Monitorul Oficial al României, Part One, No 582, June 6, 2004
[81] Emergency Ordinance No 90 of 24 June 2008 on the statutory audit of the annual financial statements and consolidated annual financial statements, Monitorul Oficial al României No 481, June 30, 2008
[82] Alexandre Swoboda, "*Robert Mundell and the Theoretical Foundation for the European Monetary Union*", IMF, December 13, 1999, accessed March 15, 2021, https://www.imf.org/en/News/Articles/2015/09/28/04/54/vc121399

importance when deciding whether a country should join a monetary union. In his view, a high degree of labor mobility can potentially stabilize the effects of asymmetric shocks: "If capital and labor shift from the industries that have suffered from a decline in demand toward those enjoying surplus demand … balance can be restored in the stability of prices and employment."[83] When experiencing asymmetric shocks, countries frequently try to prevent a deterioration in the economy by changing the exchange rate.[84] When countries have surrendered their monetary policy in favor of a common currency, however, they are no longer able to use the exchange rate as an instrument to absorb the negative effects of the occurred demand shock. In this case, in Mundell's view, similar stabilization effects can be accomplished through the mobility of labor.[85]

The opinion is that "the monetary union itself is a factor of integration which will at the same time increase the mobility of the factors of production and reduce the probability of asymmetrical shocks."[86] Moreover, "an increase in mobility for the purpose of work improves the allocation of labour resources within the Union and increases economic output and welfare as a result of a more efficient use of resources."[87] Nevertheless, the distributional effects of labor mobility must not be neglected. In this sense, it is of crucial importance whether the labor mobility long-run dynamics may show negative consequences for both sending and receiving countries. Such drawback would occur in the sending country primarily as a decrease of high-skilled working-age population, and in the receiving country – as a gradual decrease in wages.

Many scholars throughout the years have found the level of labor mobility within the EU to be significantly smaller than the one in the US.[88] These findings can be explained through the additional costs borne by the European workers such as, inter alia, language and culture barriers. At the same time, it is inarguable that labor mobility significantly increases professional and earning opportunities. Large income gaps between the Member States of the EU incentivize

[83] Ibid.; R.A. Mundell, "*A Theory of Optimum Currency Areas*", American Economic Review, Vol. 51, No. 4, 1961, pp. 657-665
[84] Ibid.
[85] R.A. Mundell, "*A Theory of Optimum Currency Areas*", American Economic Review, Vol. 51, No. 4, 1961, pp. 657-665
[86] Alexandre Swoboda, "*Robert Mundell and the Theoretical Foundation for the European Monetary Union*", IMF, December 13, 1999, accessed March 15, 2021, https://www.imf.org/en/News/Articles/2015/09/28/04/54/vc121399
[87] Timo Baas et al., "*Labour Mobility in the EU dynamics patterns and policies*", InterEconomics, volume49/3, 2014, accessed March 15, 2021m https://www.intereconomics.eu/contents/year/2014/number/3/article/labour-mobility-in-the-eu-dynamics-patterns-and-policies.html
[88] Jörn Quitzau, "*Labor Mobility*", American Institute for Contemporary German Studies, September 22, 2014, accessed March 15, 2021, https://www.aicgs.org/2014/09/labor-mobility/

workers from countries with lower income to move to higher-income countries: "Income difference nonetheless seems to be the key driver of intra-EU worker mobility since the highest flows are observed from those countries with relatively low GDP per capita to those with higher income levels and more employment opportunities."[89]

For the purpose of the present study, labor mobility is considered only as a regional movement of factors of labor, and not as the movement of factors across industries. Thus, data for the latter, although of great importance from an economic perspective, is not collected, observed, and evaluated.

According to Eurostat data, the level of EU mobile citizens of working age, measured in percentage of the home-country resident population, has increased by 0.9% in the EU in the period from 2009 to 2019[90], and both countries, together with Poland, Italy, and Portugal remain the most important sending countries in 2018.[91] The indicators for each country are as follows:

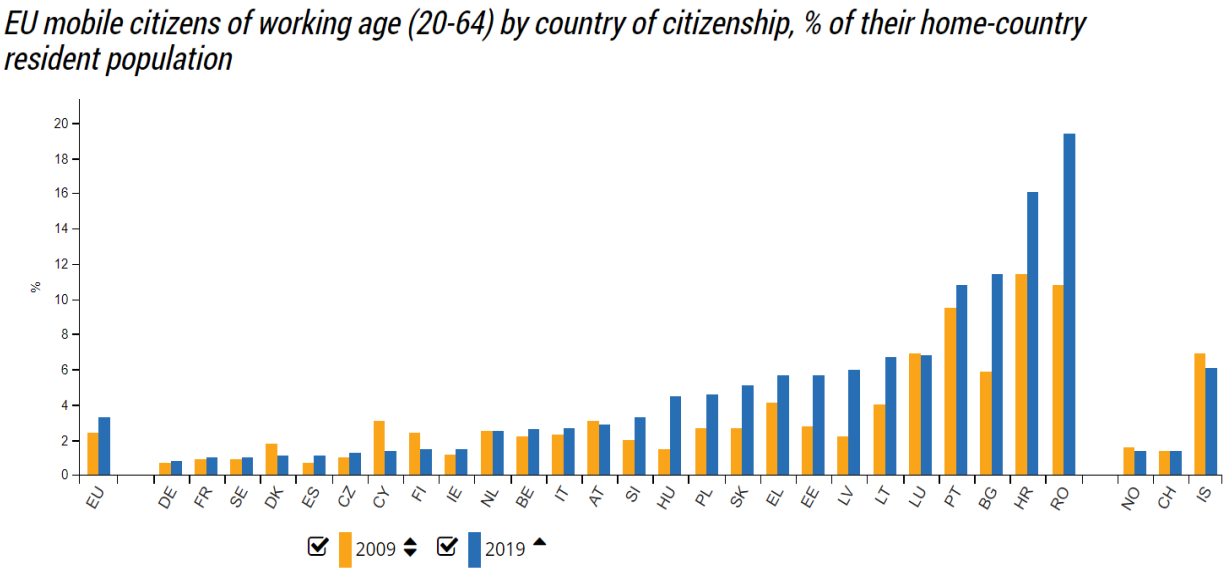

Figure 1. EU mobile citizens of working age (20-64) by country of citizenship, % of their home-country resident population. Source: Eurostat.

[89] Timo Baas et al., "*Labour Mobility in the EU dynamics patterns and policies*", InterEconomics, volume49/3, 2014, accessed March 15, 2021m https://www.intereconomics.eu/contents/year/2014/number/3/article/labour-mobility-in-the-eu-dynamics-patterns-and-policies.html

[90] "EU citizens living in another Member State - statistical overview", Statista, accessed March 17, 2021, https://ec.europa.eu/eurostat/statistics-explained/index.php/EU_citizens_living_in_another_Member_State_-_statistical_overview

[91] "Intra-EU Labour Mobility at a Glance », European Commission, accessed March 17, 2021

The level of mobile workers has increased in Bulgaria from 5.9% to 11.4% in the period 2009-2019, ranking Bulgaria third of the most mobile nations in the EU.[92] Romania, on the other hand, shows the largest increase in terms of labor mobility within the EU, with mobile citizens accounting for 10.8% in 2009 and 19.4% (almost a fifth of the population) in 2019.[93]

Despite the overall greater mobility of tertiary-educated workers in the EU, Both Bulgaria and Romania indicate lower levels than the Euro area and EU average, with a total level of post-secondary educated residents of 26% in Bulgaria and 17.5% in Romania.[94] In this sense, not only fewer residents of both countries obtain a higher education, but they are also less mobile than the residents with only secondary education. It is estimated that the number of working or studying age Bulgarians (15-62 years of age) living in other EU countries in 2020 is 464.3 thousand, and in Romania are 2 329.1 thousand.[95]

From 2009 to 2019, there is an increase in the total population in Bulgaria and a decrease by 0.8 pp of mobile workers with tertiary education. Bulgaria is in this regard one of the three Member States who show a decrease in the mobility of high-skilled workers in the selected period. Meanwhile, "a higher percentage of low skilled workers were residing abroad compared to on the country's national territory" in both Bulgaria and Romania in 2019, more than 5% higher than the EU mobile citizens average.[96]

Also in 2019, the rate of employment of mobile EU citizens is lower relative to the one of the resident population in Bulgaria by almost 10%, while Romania shows similar rates of employment of both mobile and resident population.[97]

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[92] "EU citizens living in another Member State - statistical overview", Statista, accessed March 17, 2021, https://ec.europa.eu/eurostat/statistics-explained/index.php/EU_citizens_living_in_another_Member_State_-_statistical_overview

[93] "EU citizens living in another Member State - statistical overview", Statista, accessed March 17, 2021, https://ec.europa.eu/eurostat/statistics-explained/index.php/EU_citizens_living_in_another_Member_State_-_statistical_overview

[94] Ibid.

[95] "EU/EFTA citizens of working age who usually reside in another EU/EFTA country by citizenship, age and educational attainment level", Eurostat, accessed April 23, 2021, https://ec.europa.eu/eurostat/databrowser/view/lfst_lmbpcited/default/table?lang=en

[96] "EU citizens living in another Member State - statistical overview", Statista, accessed March 17, 2021, https://ec.europa.eu/eurostat/statistics-explained/index.php/EU_citizens_living_in_another_Member_State_-_statistical_overview

[97] Ibid.

Over the research period, Bulgaria shows a decrease in the unemployment rate from 6.88% in 2007 to 4.34% in 2019. The conditions of the labor market have significantly improved over time, considering that in the decade before entering the EU Bulgarian unemployment rate is consistently above 10%, reaching almost a fifth of the population rate in 2001 (19.92%).[98]

The levels of the Romanian unemployment rate for the reference period have also improved from 6.3% in 2007 to 4.9% in 2020.[99] The highest reported unemployment rate in Romania since entering the EU is 7.1 in 2011.[100]

Migrant Integration Policy Index 2020 (MIPEX) estimates that Bulgarian labor market mobility has increased from 31% in 2010 to 48% in 2019, stating that "General access to the labour market continues to be favourable for long-term residents and open to immigrant entrepreneurs. As of 2018 family members are also equal to Bulgarian citizens, with access to social security and assistance."[101]

The MIPEX value for Romania regarding the labor market mobility shows a stable and consistent score of 46% in the period 2010-2019: "Access to the labour market is halfway favourable for non-EU newcomers. Newcomers to Romania can get basic information about jobs, services and recognition procedures, and non-EU and Romanian citizens alike enjoy the same access to education, training and social security. However, there is little general or targeted support for immigrants in the development of skills and job prospects."[102]

Both Bulgaria and Romania show an increase of national workers choosing to live and work in other EU countries in the period from 2009 to 2019. It is noticeable that the level of mobile workers in Bulgaria and Romania is significantly higher than the EU average. Romanian indicators, however, are higher than Bulgarian ones with 8% in terms of mobility of labor.

The level of mobile workers with tertial education is lower than the EU average in both Bulgaria and Romania. The number of Romanians who work or study outside their country of citizenship is much greater than the one of Bulgaria. It is important, however, to remember that

[98] "Bulgaria Unemployment Rate 1991-2021", Macrotrends, accessed April 25, 2021, https://www.macrotrends.net/countries/BGR/bulgaria/unemployment-rate
[99] "Country profile – Romania", IMF, accessed April 23, 2021, https://www.imf.org/en/Countries/ROU
[100] Ibid.
[101] Migration Integration Policy Index 2020 – Bulgaria, accessed April 19, 2021, https://www.mipex.eu/bulgaria
[102] Migration Integration Policy Index 2020 – Romania, accessed April 19, 2021, https://www.mipex.eu/romania

Romania itself is much larger than Bulgaria in terms of territory and population, which could possibly explain the above estimates in real values.

Over the reference period, the rate of high-skilled workers mobility in Bulgaria has decreased, meaning that more educated and skilled nationals find professional opportunities in their home country. The level of low-skilled nationals working abroad, however, is higher than the EU average in both Bulgaria and Romania.

Considering the decrease in the unemployment rates and the significant increase in the mobile workers of both countries in the examined period, it could be concluded that both Bulgaria and Romania have a greater level of labor mobility than the EU-average estimates.

Flexibility of prices and wages

According to Milton Friedman, "When nominal prices and wages are flexible between and within countries contemplating a single currency, the transition towards adjustment following a disturbance (…) is less likely to be associated with sustained unemployment in one country and/or inflation in another. This will in turn diminish the need for nominal exchange rate adjustments."[103]

For the purpose of the present study, the author examines the wage-price flexibility by looking at the disturbances in the level of employment in Bulgaria in Romania in the period of 2007-2020, as well as the employment flexibility index developed by the Lithuanian Free Market Institute.

[103] Milton Friedman, "*Essays in Positive Economics*", 1953, University of Chicago Press; Francesco Paolo Mongelli, "*'New' Views on the Optimum Currency Area Theory: What is EMU Telling Us*?", ECB Working Paper Series, Working Paper No. 138, April 2002

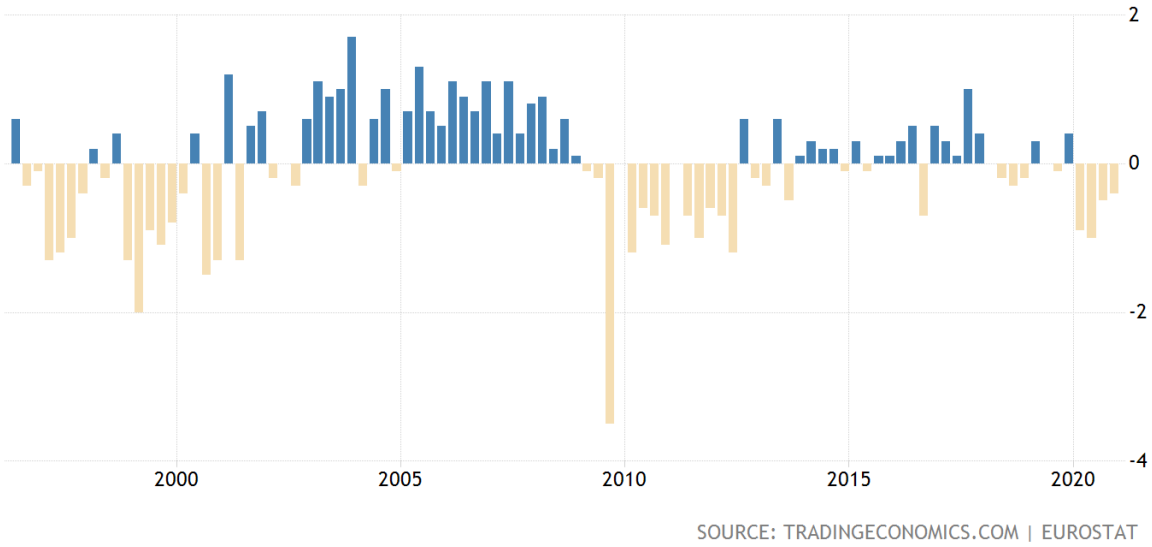

Figure 2. Employment change - Bulgaria. Source: TradingEconomics.com

The changes in the employment rate in Bulgaria from 1995 to 2020 measured quarterly are shown in Figure 2 below. It can be observed that in times of severe economic downturn not only nationally, but within the EU, there is an increase in unemployment.

According to the Employment Flexibility Index, which "reflects the indicators on hiring, working hours, redundancy rules and redundancy costs and allows a quantitative comparison of labour regulation across countries", Bulgaria is ranked 9th out of the examined EC and OECD countries in 2018 with an overall score of 79.6%,[104] which puts the country's labor market among the top five most flexible ones in the EU.[105] This position is maintained also in 2019[106] and 2020.[107] The examination conducted by the Lithuanian Free Market Institute reveals that "The Bulgarian labor market has achieved absolute record performance in the years following the economic crisis, reaching employment rates near their hypothetical maximum levels and very low unemployment, albeit with patchier performance in some of the regions of the country. Even though the sharp

[104] "*Employment Flexibility Index 2019*", Lithuanian Free Market Institute, accessed April 20, 2021, https://en.llri.lt/wp-content/uploads/2017/12/Employment-Flexibility-Index-2018_-LFMI.pdf
[105] "*Extreme disparity in European labour markets: an Employment Flexibility Index*", Lithuanian Free Market Institute, accessed April 19, 2021, http://www.epicenternetwork.eu/wp-content/uploads/2017/12/Employment-flexibility-Index.pdf
[106] *Employment Flexibility Index 2019*", Lithuanian Free Market Institute, accessed April 20, 2021, https://en.llri.lt/wp-content/uploads/2018/12/Employment-flexibility-index-2019.pdf
[107] "*Employment Flexibility Index 2020. EU and OECD Countries*", Lithuanian Free Market Institute, accessed April 03, 2021, https://www.llri.lt/wp-content/uploads/2019/12/Employment-flexibility-index2020.pdf

improvements of the past few years have started to level off, there is no reason to believe that the labor market will turn sour in the immediate future, barring a major economic crisis that spans the entire continent."[108] The overall assessment of the collected data indicates that Bulgaria shows a high level of wage and price flexibility, especially in recent years.

Romania shows larger deviations in employment rates both in positive and negative direction in the examined period. Figure 3 below represents the changes in Romanian employment rate for the observed period.

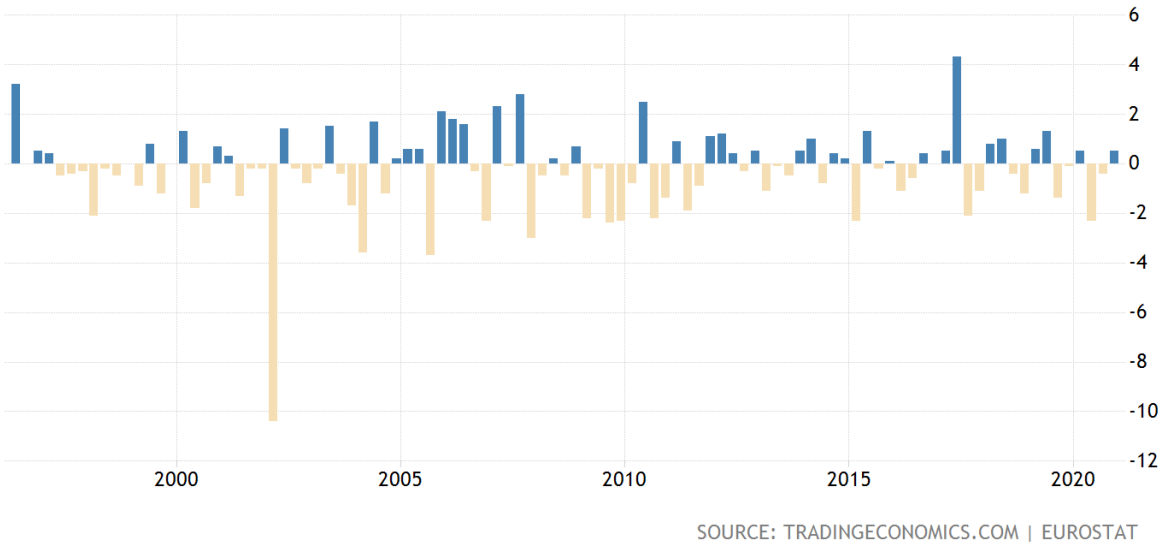

Figure 3.Employment change - Romania. Source: TradingEconomics.com

The Employment Flexibility Index ranks Romania 22nd in 2018 with an overall score of 63.9%[109], and 23rd in 2019[110] and 2020[111] with the same level of flexibility.

The collected and analyzed data indicates that Bulgaria shows better performance than Romania in terms of price-wage flexibility, as its deviations in the employment ratio mostly remain up to 1% in both directions (with the exception of the increase in unemployment in 2010 by almost

[108] Ibid.
[109] "Employment Flexibility Index 2019", Lithuanian Free Market Institute, accessed April 20, 2021, https://en.llri.lt/wp-content/uploads/2018/12/Employment-flexibility-index-2019.pdf
[110] Ibid.
[111] "*Employment Flexibility Index 2020. EU and OECD Countries*", Lithuanian Free Market Institute, accessed April 03, 2021, https://www.llri.lt/wp-content/uploads/2019/12/Employment-flexibility-index2020.pdf

4%). The greater rigidity of the labor market in Romania, on the other hand, allows for greater changes in the unemployment ratio. The research of the Lithuanian Free Market Institute is in line with this statement, as Romania is consistently ranked lower than its southern neighbor in terms of price-wage flexibility.

It is important to note, however, that despite the difference between the flexibility ratios of both countries of almost 16%, both countries are relatively high ranked in comparison to the other EU Member States such as France (overall flexibility of 38.4% in 2020), Portugal (45.5%), Croatia (51.2%), Estonia (59%), and even Germany (63.5%).[112] This contrast allows concluding that, in terms of wage and price adjustments, the policies of Bulgaria and Romania are rather flexible.

Fiscal transfers

Another OCA criterion – the one of fiscal integration – is developed by Peter Kenen, who argues that "The higher the level of fiscal integration between two areas, the greater their ability to smooth asymmetric shocks trough fiscal transfers from a low-unemployment region to a high-unemployment region."[113] In this sense, "if a diverse shock hit a common currency area, fiscal integration between regions can mitigate the impact."[114]

The question regarding fiscal transfers, as well as the one of homogenous preferences, can be considered a rather political criterion, as it is closely connected to the political decisions of the countries within the currency union.

In order to measure the fiscal integration, the author examines the amount of EU funds allocated to each of the countries of interest not only in real values but also as a percentage of the national GDP. Furthermore, the author looks at the average operating budgetary balance in the EU

[112] "*Employment Flexibility Index 2020. EU and OECD Countries*", Lithuanian Free Market Institute, accessed April 03, 2021, https://www.llri.lt/wp-content/uploads/2019/12/Employment-flexibility-index2020.pdf
[113] George S. Tavlas, "*Benefits and Costs of Entering the Eurozone*", Cato Journal, Volume 24, p.89–106 (2004); P.B. Kenen, "The Theory of Optimum Currency Areas: An Eclectic View", in R.A. Mundell, A. Swoboda (eds.): "*Monetary Problems of the International Economy*", Chicago 1969, University of Chicago Press, pp. 41-60
[114] Tanja Broz, "*The Theory of Optimum Currency Areas: A Literature Review*", Privredna kretanja I ekonomska politika 104/2005, p.59

countries to evaluate whether Bulgaria and Romania are givers or rather receivers in terms of EU funds.

It is estimated by the ECB that in the period from 1989 to 2013 [in the case of our countries of interest, the starting period is considered to be 2007] structural and investment funds of 8,996.0 million euros are allocated to Bulgaria, amounting to 41.6 % of national GDP[115]. In Romania, the allocated funds are 25,173.4 million euro, equal to 38.1 % of the Romanian GDP[116]. In the period 2014-2020, Bulgaria is ranked fifth in terms of cumulated allocation of EU funds, receiving 9,765.7 million euros (18.8% of national GDP), with larger amounts received only by Croatia, Latvia, Hungary, and Lithuania[117]. 30,580.4 million euros are allocated to Romania over the same period, covering 16.2% of domestic GDP[118].

Over the period 2007-2020, both Romania and Bulgaria are among the countries where European funding cumulates to a significant share of GDP. This argument is in line with the estimations of the average EU operating budgetary balance for 2000-2019[119]:

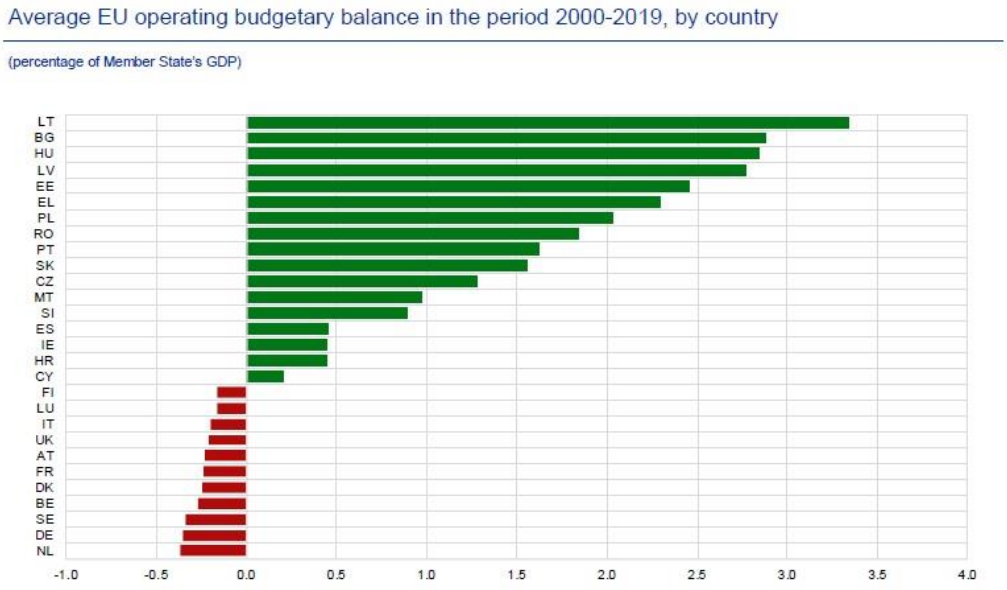

Figure 4. Average EU operating budgetary balance in the period 2000-2019, by country. Source: ECB Occasional Paper Series No 252, December 2020: Fiscal Transfers and Economic Convergence.

[115] João Capella-Ramos, Christina Checherita-Westphal, and Nadine Leiner-Killinger, "Fiscal Transfers and Economic Convergence", European Central Bank, Occasional Paper Series No 252, December 2020, p. 17
[116] Ibid.
[117] Ibid.
[118] Ibid.
[119] Ibid., p. 18

The figure above can be used to evaluate whether a certain country is receiving or giving more in terms of EU funds. In the case of Bulgaria and Romania, it is evident that both are receiving significantly more than they are giving. Considering that the level of economic development of both countries is below the EU-average level, it could be assumed that the amount of allocated funds aims to stimulate economic development in countries whose economic performance is not as stable as in the other Member States. In this sense, it could be assumed that fiscal integration in the EU is at a noticeably high level, as the economically developed countries give more resources to the Union than they receive, thus stimulating the countries with lower economic results.

According to the present findings, both countries show significant similarities in terms of fiscal integration. Considering that this is the idea of this OCA criterion - the support of the more affected regions /in this case - the less developed ones/ from the more stable or unaffected ones, it could be concluded that both countries meet this condition of the OCA theory and are suitable to join a currency union.

Structure of the business cycles

Business cycles synchronization is one of the crucial elements of the OCA theory. According to its proponent Mundell and other scholars, "the more highly correlated the business cycles are across member countries, the more appropriate a common currency"[120].

A business cycle can be defined as "a sequence of upward and downward shifts in economic activity"[121]. The "modern" approach towards the business cycle suggests that it is "the deviations of output around a growing trend."[122] It is stated by the ECB that "A high degree of business cycle alikeness is of particular importance for the smooth functioning of EMU, insofar as

[120] Jeffrey A. Frankel and Andrew K. Rose, "*The Endogeneity of the Optimum Currency Area Criteria*", The Economic Journal, Vol. 108, No. 449 (Jul., 1998), p. 1013
[121] Emin Ertürk, Derya Yılmaz and Işın Çetin: "*Optimum Currency Area Theory and Business Cycle Convergence in EMU: Considering the Sovereign Debt Crisis*" in "Handbook of Research on Global Indicators of Economic and Political Convergence", IGI Global, 2016, p. 67
[122] Theophilos Papadimitriou, Periklis Gogas and Georgios Antonios Sarantitis: "Business Cycle Convergence: A Survey of Methods and Models", Democritus University of Thrace, April 2014

it facilitates the conduct of a common monetary policy."[123] In this sense, the synchronization of the business cycles of the Member States is essential for the smooth functioning of the euro area.

It is stated that "Business cycle convergence can be measured, for example, as business cycle dispersion (e.g. whether output gaps are of a similar size) and as business cycle synchronization (e.g. whether output gaps swing simultaneously)"[124]. The IMF defines the output gap as "an economic measure of the difference between the actual output of an economy and its potential output"[125]. In other words, the output gap (also referred to as "production capacity" of a country) is showing the difference between the actual amount of goods and services in the economy of a specific country over a specific period of time and the potential amount of goods and services in the same country over the same period when the economy is working in its full capacity and is maximally efficient.[126] This output gap can be expressed by positive or negative values. A positive output gap shows that the economy is functioning beyond its full capacity, often due to high demand. A negative output gap, on the other hand, indicates that the economy is not performing in its full capacity.[127]

According to some authors, the output gaps are "used for identifying the cyclical and structural components in government budget balances and indirectly in assessing the sustainability of government debt."[128] In this Thesis, however, the author uses the output gap as a measure of the correlation between the business cycles in the studied countries and the Eurozone.

To determine the output gap, the data from the European Commission Economic Forecasts in the selected period will be used, namely the reports from 2011, 2016, and 2020. The output gap is measured in the reports as relative to the potential GDP, which can be defined differently depending on the research period. In the short run, the potential GDP measures "by how much total demand can develop during that short period without inducing supply constraints and

[123] João Capella-Ramos et al., "Fiscal transfers and economic convergence", ECB Occasional Paper Series No 252, December 2020, accessed April 15, 2021, https://www.ecb.europa.eu/pub/pdf/scpops/ecb.op252~e307b7777c.en.pdf
[124] Ibid.
[125] Sarwat Jahan and Ahmed Saber Mahmud, "What is the Output Gap?", Finance & Development, September 2013, Vol. 50, No. 3, https://www.imf.org/external/pubs/ft/fandd/2013/09/basics.htm
[126] Ibid.
[127] Ibid.
[128] Heikki Oksanen, "New Output Gap Estimates for the Euro Area and Elsewhere", Revue de l'OFCE 2019/HS, pp. 31-53, accessed 23 March 2021, https://www.cairn.info/revue-de-l-ofce-2019-HS-page-31.html

inflationary pressures."[129], while in the long run the potential GDP is closely correlated to the technical progress in the future and the expansion of the labor potential.[130]

In order to assess and compare the indicators for both countries in the light of potential admission to a currency union, it is crucial to determine to which extent are their values correlated with the ones of the Eurozone. Figure C shows the estimates of the output gap simultaneously for Bulgaria, Romania, and the Euro area.

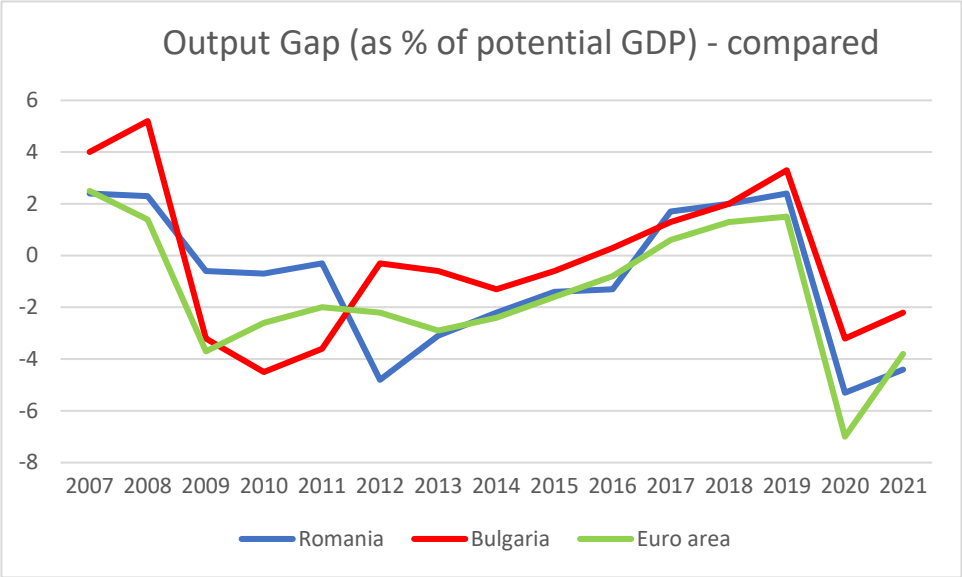

Figure 5. Output Gap - compared. Source: own elaborations from European Commission Economic Forecasts – Autumn 2011, Autumn 2016, Autumn 2020

Several important conclusions can be drawn from this figure. First, Bulgaria has the highest values at the beginning and at the end of the study period, therefore performing over its capacity in 2007 and under it in 2019, but not to such extent as the other countries. The financial crisis of 2009, however, has lowered its values even below those of the Eurozone countries, while Romania seems not so badly affected and keeps the output gap nearly to 0 in 2009-2010. This can be explained by the fact that Romania, unlike Bulgaria with the Currency Board or the Euro area

[129] Francesca D'Auria et al., "*The Production Function Methodology for calculating potential growth rates and output gaps*", Economic Papers 420, 2010, https://ec.europa.eu/economy_finance/publications/economic_paper/2010/pdf/ecp420_en.pdf
[130] Ibid.

countries with the common currency, has a floating exchange rate, which, in theory, can serve as a "shock absorber".[131]

Between 2011 and 2013, the values diverge significantly across the countries, after which a common and even synchronized rise is observed, followed by a joint sharp decrease caused by the Covid-19 crisis.

It is noteworthy that the overall indicator for the Euro area shows lower values than those of Bulgaria and Romania in 2020. According to the predictions of the European Commission, an increase in the output gap is expected in all countries by the end of 2021.

Besides the exact figures, the direction of the business cycles of Bulgaria and Romania seem synchronized and similar not only to each other but also to that of the Euro area countries. Considering that countries with "symmetric" business cycles are more likely to form or enter a currency union[132], it can be concluded that a monetary union would be suitable for both countries, as in the event of external shocks, countries would need a similar monetary policy.

As can be seen from the analyzed data, the criterion of the OCA regarding the business cycle synchronization is met. Moreover, the theory of endogeneity of the OCA suggests that, in this case, entering a currency union can lead to even more profound business cycle synchronization among the countries[133].

It is interesting to mention, however, that the observed shocks in the selected period are not country-specific but rather external. There is no indication in the collected data of significantly different (idiosyncratic) demand shock affecting only one of the countries. In this context, "If a euro candidate country is predominantly affected by the same economic shocks as the euro area and if these shocks affect the two economies in a similar fashion, the common monetary policy can then be adequate for all countries."[134]

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[131] Milan Deskar-Škrbić, Karlo Kotarac, Davor Kunovac, "*The Third Round of the Euro Area Enlargement – Are the Candidates Ready?*", Journal of International Money and Finance, October 2020, p.7
[132] Jeffrey A. Frankel and Andrew K. Rose, "*The endogeneity of the Optimum Currency Area Criteria*", The Economic Journal, Vol. 108, No. 449 (Jul., 1998), p. 1009
[133] Ibid., p. 1011
[134] Milan Deskar-Škrbić, Karlo Kotarac, Davor Kunovac, "*The Third Round of the Euro Area Enlargement – Are the Candidates Ready?*", Journal of International Money and Finance, October 2020

Openness of the economy

According to Ronald McKinnon, "the degree of openness of the economy [is] a key variable to be taken into account."[135] In his Optimum Currency Areas, he stresses that "…if we move across the spectrum from closed to open economies flexible exchange rate became both less effective as a control device for external balance and more damaging for internal price level stability."[136] In this sense, "The more open the economy, the more sensitive it will be to shocks and the less stable and liquid its currency will be." [137]

The openness of the economy is understood by Paul De Grauwe as "the degree to which a country is integrated with the rest of the world"[138], explaining that "the more open economy imports more (as a percentage of total consumption) so that the consumer price index (CPI) increases more, leading to a stronger wage-price spiral than in the relatively closed economy."[139]

Other authors define the openness of the economy as "the degree of participation in international trade" and "the share of economic activity that is devoted to international trade"[140]. The openness of the countries is calculated in exports and imports as a percentage of GDP.

It is believed that the more open an economy is, the more beneficial is for it to join a currency union. In order to evaluate the openness of the researched countries, it is important to position them in a comparative setting with the other Member States of the EU.

[135]Jacques Pelkmans, "*European Integration. Methods and Economic Analysis*", 3rd Edition, Pearson Education, 2006, p. 386; R.I. McKinnon, "*Optimum Currency Areas*", American Economic Review, Vol. 53, No. 4, 1963, pp. 717-725

[136] Ronald I. McKinnon, "Optimum Currency Areas", The American Economic Review, Vol. 53, No. 4 (Sep., 1963), https://www.experimentalforschung.econ.uni-muenchen.de/studium/veranstaltungsarchiv/sq2/mckinnon_aer1963.pdf

[137] Alexandre Swoboda, "*Robert Mundell and the Theoretical Foundation for the European Monetary Union*", IMF, December 13, 1999, accessed March 15, 2021, https://www.imf.org/en/News/Articles/2015/09/28/04/54/vc121399

[138] Paul de Grauwe, "*Economics of Monetary Union*", 12th Edition, Oxford University Press, 2018, p.50

[139] Paul de Grauwe, "*Economics of Monetary Union*", 12th Edition, Oxford University Press, 2018, pp.50-51

[140] Kurt A. Hafner and Jennifer Jager, "*The Optimum Currency Area Theory and the EMU*", Intereconomics, Volume 48, Number 5, 2013, pp. 315–322

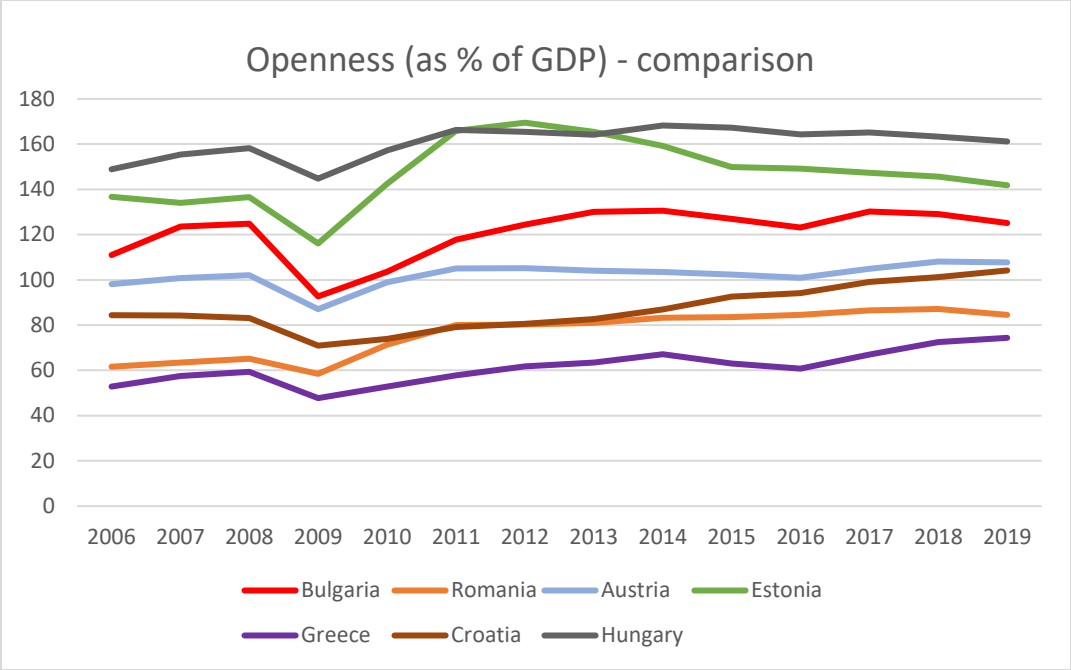

Figure 6. Trade Openness (as % of GDP) - comparison. Source: The World Bank.

Figure 6 above allows for comparison between EU countries. As it can be seen, the highest degree of openness is shown by Hungary, followed by Estonia, Bulgaria, and Austria. The lowest level of trade openness is observed in Greece and Romania.

Bulgaria shows relatively high levels of openness and is considered "a small, open economy"[141]. For the examined period, Bulgaria shows an average level of openness of 120.956% of GDP, with the lowest level of 92.693% in 2009 and the highest level of 130.589% in 2014. The country is ranked 24th worldwide in the global ranking of trade openness in 2019, 15th in Europe and 13th in the EU[142].

Despite the slight deterioration in the period 2018-2019, Romania also shows improvement in terms of trade openness. The average rate of exports and imports for the period of research is 76.51671% of GDP with a minimum of 58.473% in 2009 and a maximum of 87.137% in 2018.

[141] Michele Chang, "*Economic and Monetary Union*", Palgrave, 2016 p. 177
[142] "Trade Openness: Bulgaria", TheGlobalEconomy, accessed April 05, 2021, https://www.theglobaleconomy.com/rankings/trade_openness/European-union/#Bulgaria

According to the Country ranking regarding trade openness, Romania is rated 71st worldwide, 31st in Europe, and 22nd in the EU.

It is interesting to state that the Member States who have already adopted the euro do not necessarily show higher level of trade openness than the Member States with a derogation. It is important yet to remember that the degree of openness is an OCA criterion but not a Maastricht one, as the presented results confirm.

As per the main countries of interest, Romania shows a markedly lower degree of trade openness than Bulgaria and a similar level to the one of the Eurozone countries in 2019. Considering the gradual but yet evident increase in Romania's estimates regarding trade openness, as well as the great uncertainty due to the global pandemic, it is nearly impossible to calculate whether Romania is going to become more open in terms of trade in the following years.

Trade flows

According to Frankel and Rose, "Countries that are highly integrated with each other, with respect to international trade in goods and services, are more likely to constitute an optimum currency area."[143] In this Thesis, the author tries to measure the level of integration of the researched countries with the Euro area by evaluating the developments of the imports and exports as a percentage of GDP over the study period. The assumption is that, ceteris paribus, increasing levels of trade flows between the Eurozone and Bulgaria and Romania indicate the fitness of the countries to join the EMU.

[143] Jeffrey A. Frankel and Andrew K. Rose, "The Endogeneity of the Optimum Currency Area Criteria", The Economic Journal Vol. 108, No. 449, July 1998, p. 1011

ECB Convergence reports provide the following data regarding the trade flows between Bulgaria and the Euro area:

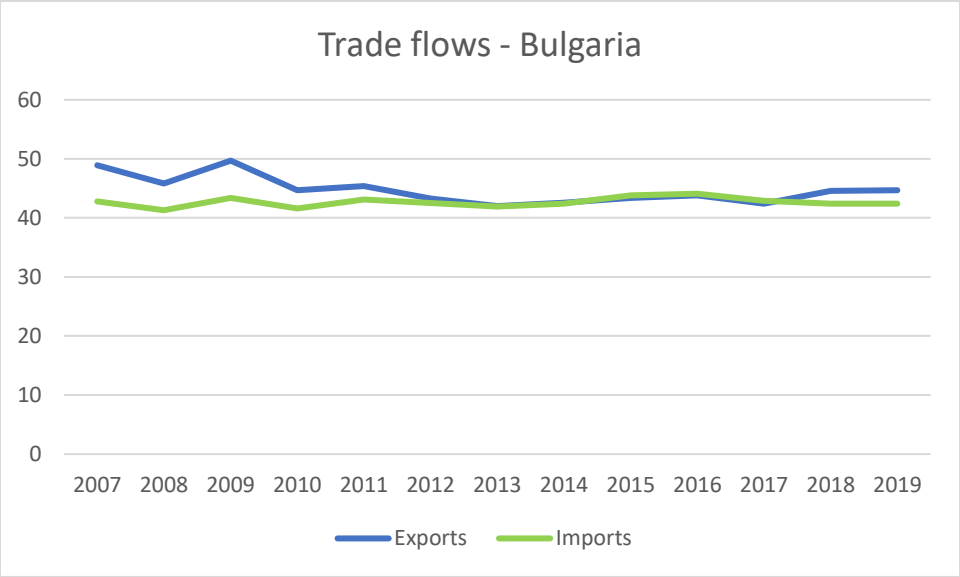

Figure 7. Trade flows (exports and imports as % of GDP) - Bulgaria. Source: own elaboration from ECB Convergence reports 2007-2020.

The level of imports and exports in Bulgaria seems to have slightly deteriorated since joining the EU. This data leads at first to controversial conclusions. On one side, the reduction of trade barriers since 2007 allows the assumption that trade must increase significantly between the Euro area countries and Bulgaria: "More integration can be expected to lead to more trade…"[144] On the other side, we must not forget that the GDP is also not a constant metric, but rather a constantly changing flow. The Bulgarian GDP is measured to have risen from 44.41 billion US dollars in 2007 to 68.56 billion US dollars in 2019[145]. If the level of trade as a percentage of GDP has increased over the years and the trade with the Euro area as % of GDP has remained relatively identical, then the level of actual trade with the real values must have also risen. Indeed, if we look at the figures with the development of Bulgarian imports and exports with the rest of the world, measured in BGN million, there is a noticeable and a significant increase in both indicators.

[144] Ibid.,, p. 1012
[145] "GDP – Bulgaria", TradingEconomics, accessed April 05, 2021, https://tradingeconomics.com/bulgaria/gdp

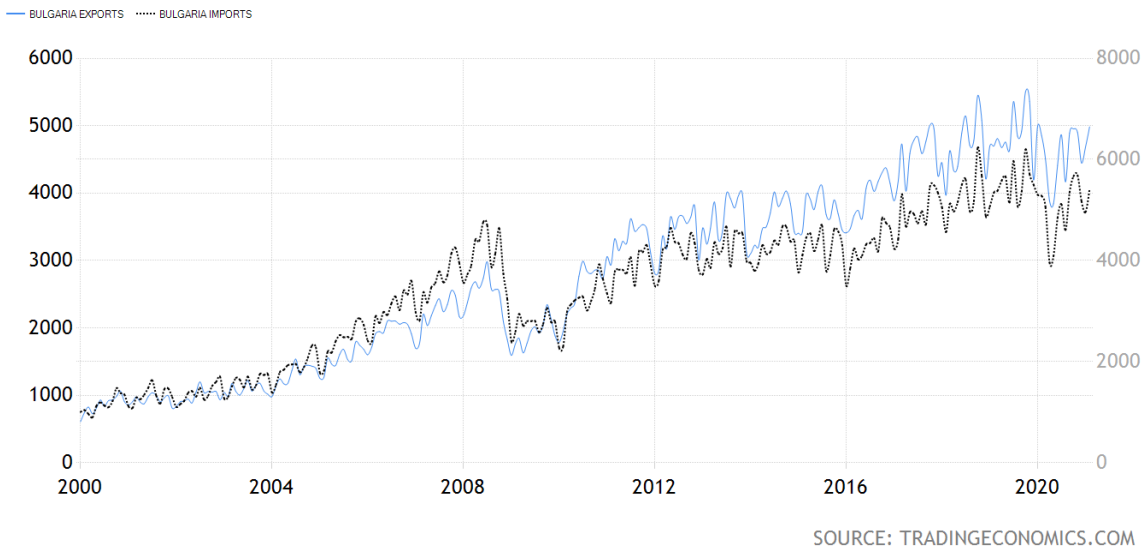

Figure 8. Developments of Bulgarian imports and exports in BGN Million. Source: TradingEconomics.com

According to the Observatory of Economic Complexity, Bulgaria is an exporter of refined petroleum, packaged medicaments, refined copper, wheat, raw copper, and iron pyrites, with main export trading partners Germany, Romania, Italy, Turkey, and Greece; and an importer of crude petroleum, copper ore, cars, packaged medicaments, and refined petroleum, with main importer trading partners Germany, Russia, Italy, Romania, and Turkey.[146] Bulgaria is ranked number 60 exporter in the world and has reported a change by $4.07B in exports the period from 2014-2019, and a number 61 trade destination in the world with an increase of $4,17B in imports for the same period.[147] The conclusion that can be made is that both imports and exports in Bulgaria have increased since joining the EU.

[146] "Country profile – Bulgaria", The Observatory of Economic Complexity, accessed April 20, 2021, https://oec.world/en/profile/country/bgr
[147] "Country profile – Bulgaria", The Observatory of Economic Complexity, accessed April 20, 2021, https://oec.world/en/profile/country/bgr

Romania, on the other side, shows the following trade flows with the Euro area within the observed period:

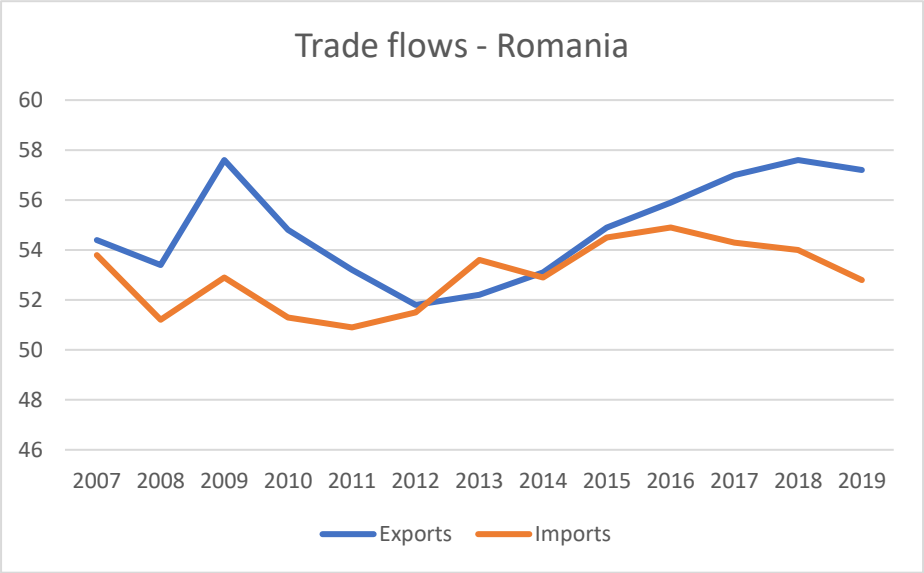

Figure 9. Trade flows (exports and imports as % of GDP)– Romania. Source: own elaboration from ECB Convergence reports 2007-2020.

Although at first sight looking otherwise, Romania also shows little improvement in its trade flows in the selected period. Romanian exports have increased from 54.4% of GDP in 2007 to 57.2% in 2019, while imports have dropped by 1% of GDP. The country's GDP, however, has also experienced a significant increase from 174.6 billion US dollars in 2007 to 250.08 billion US dollars in 2019.[148] Consequently, its levels of imports and exports have also increased greatly.

[148] "GDP – Romania", TradingEconomics, accessed April 05, 2021, https://tradingeconomics.com/romania/gdp

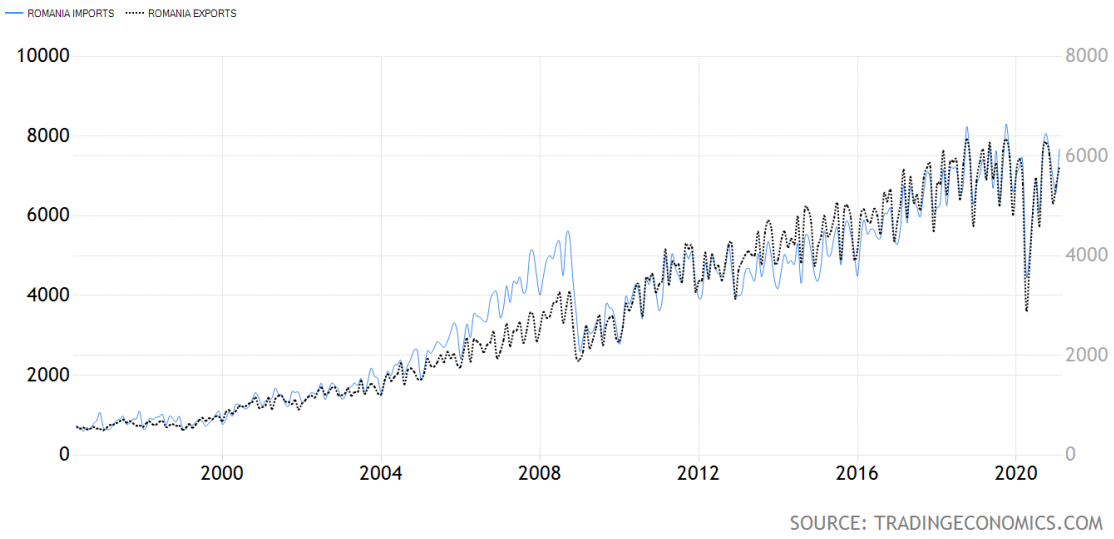

Figure 10. Development of Romanian imports and exports in EUR Billion. Source: TradingEconomics.com

The Observatory of Economic Complexity states that Romania is an exporter of vehicle parts, cars, insulated wire, refined petroleum, sunflower seeds, and insulated wire, with main export trading partners Germany, Italy, France, Hungary, and United Kingdom; and an importer of vehicle parts, crude petroleum, cars, packaged medicaments, and insulated wire, with main importer trading partners Germany, Italy, Hungary, Poland, and China.[149] Romania is ranked number 41 exporter in the world and has reported an increase of $7.06B in exports the period from 2014-2019, and a number 36 trade destination in the world with an increase of $19B in imports for the same period.[150] In conclusion, both imports and exports in Romania have increased since joining the EU.

The indicators of imports and exports in Bulgaria and Romania have improved over the examined period. Comparing the trade flows in both Member States, however, Romania shows better levels of trade integration and is ranked higher than Bulgaria in the global ranking of exporters and importers.

[149] "Country profile – Romania", The Observatory of Economic Complexity, accessed April 20, 2020, https://oec.world/en/profile/country/rou
[150] "Country profile – Romania", The Observatory of Economic Complexity, accessed April 20, 2020, https://oec.world/en/profile/country/rou

In the view of the research questions, however, it is beneficial to analyze not only the trade integration of the countries in the global and the Euro area context but also between each other. In 2019, Romania is Bulgaria's second-largest export partner (total of $2.87 billion) with main product raw iron bars, industrial fatty acids, oils and alcohols, and tractors, and Bulgaria is Romania's seventh-largest export partner (total of $2.63 billion) with main product refined petroleum, sunflower seeds, and petroleum gas. Since 1995, the rate of exports of Bulgaria to Romania has increased by 16.5% annual rate, while the exports of Romania to Bulgaria – by 16.3% annual rate.

Internationally, Greece, North Macedonia, and Namibia imported more from Bulgaria than from Romania, while Germany, Italy, and France imported more from Romania. [151]

The overall assessment of the collected data indicates that Romania is performing better than Bulgaria in terms of trade integration internationally as well as on the Eurozone level. Nevertheless, the bilateral trade intensity of the countries is relatively high as they are closely connected to each other through long-established trade linkages.

Product diversification

In 1969, Peter Kenen introduces another criterion for the OCA theory, focused on product diversification[152]. This criterion implies that the industrial structure of a country also has an important role in determining whether a country should form or join a monetary union. In Kenen's view, "… a well-diversified national economy will not have to undergo changes in its terms of trade as often as a single-product national economy"[153], since "a highly diversified economy with

[151] "Bulgaria/Romania",The Observatory of Economic Complexity, accessed April 02, 2021, https://oec.world/en/profile/bilateral-country/bgr/partner/rou?dateAvailableSelectorCountry1=exportDateCountry1Available48

[152] P.B. Kenen, "The Theory of Optimum Currency Areas: An Eclectic View", in R.A. Mundell, A. Swoboda (eds.): "Monetary Problems of the International Economy", Chicago 1969, University of Chicago Press, pp. 41-60; Oleksandra Stoykova, "*Optimum Currency Areas: Theories and Applications*", Myśl Ekonomiczna i Polityczna, 4(63), 2018, accessed February 20, 2021, p. 20

[153] Tanja Broz, "*The Theory of Optimum Currency Areas: A Literature Review*", Privredna kretanja I ekonomska politika 104/2005, p.58; P.B. Kenen, "The Theory of Optimum Currency Areas: An Eclectic View", in R.A. Mundell, A. Swoboda (eds.): "*Monetary Problems of the International Economy*", Chicago 1969, University of Chicago Press, pp. 41-60

highly diversified exports is less likely to suffer from shocks, since the shock in one industry tends to be compensated by the opposite in another."[154]

The degree of product diversification in a country can be measured by examining the distribution of its GDP across the economic sectors and its development over time. For the purpose of this study, both GDPs of Bulgaria and Romania are assessed through the changes in the size of their sectors, and the most important components of these sectors are identified.

The industrial structure of a country consists of three sectors - agriculture, manufacturing (industry), and services[155]. In the case of Bulgaria, the main contribution to the output comes from the sector of services, which has been gradually increasing in the past decade from 56.12% of the economy in 2009 to 60.68% in 2019[156], with the largest gains from transportation, tourism, and IT services.[157] Manufacturing, including energy, mining, metallurgy, and food industry, is the second-largest sector of the economy, despite the gradual decrease in its size – from 26.48% in 2009 to 22.3% in 2019.[158] The smallest contribution comes from the agriculture sector, estimated at 3.19 % in 2019 after a decrease of 1% since 2009.[159]

The indicators of Romania show an increase in the services sector from 47.18% in 2009 to 58.16% in 2019[160], with top services transportation, miscellaneous business, IT services, tourism, and construction.[161] The manufacturing sector, fallen by 6% in the past decade and amounting to 28.16% of GDP in 2019[162], mostly comprises of car and machine industry, chemicals, and

[154] Oleksandra Stoykova, "*Optimum Currency Areas: Theories and Applications*", Myśl Ekonomiczna i Polityczna, 4(63), 2018, accessed February 20, 2021, p. 21
[155] J. Atikian, "What Is Industrial Structure?" in "*Industrial Shift: The Structure of the New World Economy*", Palgrave Pivot, New York, 2013, p. 7
[156] [156] "Share of economic sectors in Bulgaria", Statista, accessed April 25, 2021, https://www.statista.com/statistics/373492/share-of-economic-sectors-in-the-gdp-in-bulgaria/
[157] "Country profile – Bulgaria", The Observatory of Economic Complexity, accessed April 20, 2021, https://oec.world/en/profile/country/bgr?exportServicesYearsSelector=ServiceYearFlow218
[158] "Share of economic sectors in Bulgaria", Statista, accessed April 25, 2021, https://www.statista.com/statistics/373492/share-of-economic-sectors-in-the-gdp-in-bulgaria/
[159] Ibid.
[160] "Share of economic sectors in Romania", Statista, accessed April 25, 2021, https://www.statista.com/statistics/373136/share-of-economic-sectors-in-the-gdp-in-romania/
[161] "Country profile – Romania", The Observatory of Economic Complexity, accessed April 20, 2020, https://oec.world/en/profile/country/rou
[162] "Share of economic sectors in Romania", Statista, accessed April 25, 2021, https://www.statista.com/statistics/373136/share-of-economic-sectors-in-the-gdp-in-romania/

construction materials[163]. Romanian agriculture adds to 4.1% of GDP and has decreased by 2% from 2009 to 2019.[164]

In terms of product diversification, both Bulgaria's and Romania's GDP have services as the most developed sector and agriculture – as the least contributing one. Romania, however, shows higher industrialization level than Bulgaria by 6%. At the same time, significant differences can be observed in the industrial structure of both countries – Romania's biggest contributor to GDP [in the secondary sector of the economy] is the car industry, while in Bulgaria the energy and mining industries are prevailing.

Neither of the economies is completely specialized and dependent on only one of its sectors, despite the large size of the services industries in both countries. From the observed information it can be concluded that both Member States have a sufficient degree of product diversification.

Homogeneity of preferences

Another criterion for evaluating whether for certain countries is beneficial to join a monetary union – the homogeneity of preferences – implies the following idea: since after joining an OCA, the countries would have to implement a common monetary policy when dealing with asymmetric shocks, it is critical for them to have rather similar preferences even before entering the union in order to achieve wide consensus at a later stage.[165] In this sense, a member of a currency union would have to set aside its own national interests and consider the benefit for the entire union when deciding upon common monetary policy; and the more similar are the countries'

[163] "Country profile – Romania", The Observatory of Economic Complexity, accessed April 20, 2020, https://oec.world/en/profile/country/rou
[164] "Share of economic sectors in Romania", Statista, accessed April 25, 2021, https://www.statista.com/statistics/373136/share-of-economic-sectors-in-the-gdp-in-romania/
[165] Kurt A. Hafner and Jennifer Jager, "*The Optimum Currency Area Theory and the EMU*", Intereconomics, Volume 48, Number 5, 2013, pp. 315–322

political approaches toward growth, inflation, and unemployment[166], the better they will counter-balance asymmetric shocks.

For the purpose of this study, the author will compare the developments of the average annual income in the countries of interest and two Eurozone countries – Estonia and Austria, in order to compare the homogeneity of policy preferences among them and thus discover whether Bulgaria and Romania fulfill this OCA criterion. Graphically, the comparison is represented as follows:

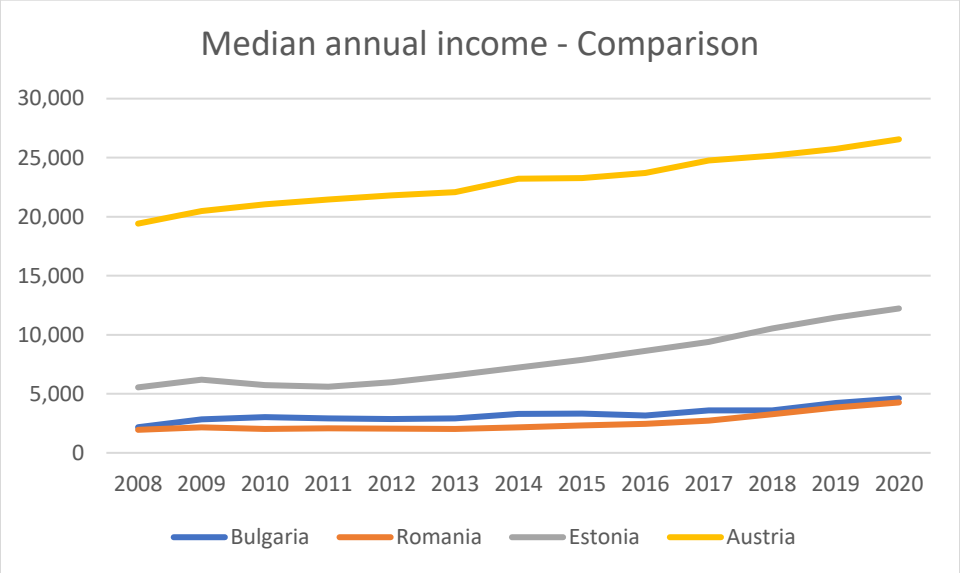

Figure 11. Median equalized net income (annual, in euro) – Comparison. Source: own elaborations from Mean and median income by age and sex - EU- ILC and ECHP surveys.

The figure above represents the average annual income in the selected countries in the period from 2008 to 2020, calculated in euro. It is noticeable that the average income in both Bulgaria and Romania is well below the one of Austria. The results for Bulgaria and Romania are showing only negligible differences which, in light of the present study, could lead to the assumption of homogenous preferences.

It is evident also that there is a consistent trend of improving the estimates in each country – and considering that all the countries are moving in the same direction and despite the major

[166] E. Tower and Thomas Willet, "*The Theory of Optimum Currency Areas and Exchange Rate Flexibility*", 1976, International Finance Section, No. 11, Princeton University

differences in the annual income, it could be speculated that it wouldn't be too challenging for the countries to adopt a common monetary policy.

9.2. Maastricht Convergence criteria

According to Article 140 of the Treaty of the functioning of the European Union (TFEU), "*At least once every two years, or at the request of a Member State with a derogation, the Commission and the European Central Bank shall report to the Council on the progress made by the Member States with a derogation in fulfilling their obligations regarding the achievement of economic and monetary union. These reports shall include an examination of the compatibility between the national legislation of each of these Member States, including the statutes of its national central bank, and Articles 130 and 131 and the Statute of the ESCB and of the ECB.*"[167]

The main task of the reports of the ECB and EC is to assess "whether a high degree of sustainable economic convergence has been achieved, whether the national legislation is compatible with the Treaties and the Statute of the European System of Central Banks and of the European Central Bank (Statute), and whether the statutory requirements are fulfilled for the relevant national central bank (NCB) to become an integral part of the Eurosystem."[168] The institutions use a common analytical framework throughout all their reports in order to make a consistent evaluation of the economic and legal convergence of the countries, as well as "to ensure continuity and equal treatment"[169].

The reports of the ECB and EC are used in this Thesis to collect, analyze and compare data for numerous indicators for both Bulgaria and Romania, as well as other countries such as Hungary, Estonia, and Croatia.

[167] Article 140, Treaty on the Functioning of the European Union, Official Journal of the European Union, C 326, vol. 55, October 26, 2012
[168] Ibid.
[169] Ibid.

Price stability

The first and the most important criterion in terms of economic convergence which needs to be fulfilled by the Member States with derogation is price stability. Article 282 of TFEU specifies price stability as the primary objective of the ESCB, without giving an explicit definition[170]. The rationale behind this criterion is mainly that inflation is closely connected to the implemented monetary policy. By forming a currency union and adopting a common currency, the participating countries give up their national monetary policy and thus empower an external monetary authority – in our case, the ECB, to decide upon and implement a common monetary policy strategy. Consequently, "Now that the national exchange rates were to disappear, it was essential that every member country remain competitive by rigorously adhering to price stability objective"[171].

Baldwin and Wypolzs relate this criterion to the OCA theory and argue that "Competitiveness was essential to uphold and deepen the two OCA criteria that were best fulfilled. Indeed, the Kenen and McKinnon criteria rest on deep trade integration, which can flourish only if each and every country remains competitive. In addition, price stability was a litmus test of two other OCA criteria. It would be a key signal that the preference for low inflation was hitherto widely shared, as required by the homogeneity of preferences criterion."[172] Moreover, it would be more effortless to maintain a single monetary trajectory by the common central bank, if the level of inflation in the participating countries are not greatly different.

The Protocol (No 13) on the convergence criteria considers the criterion of price stability fulfilled when "*a Member State has a price performance that is sustainable and an average rate of inflation, observed over a period of one year before the examination, that does not exceed by more than 1½ percentage points that of, at most, the three best performing Member States in terms of price stability.*"[173] Inflation is set to be calculated by the Harmonized Index of Consumer Prices on 12-months average periods.

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[170] Richard Baldwin and Charles Wyplosz, "*The Economics of European Integration*", 6th Edition, McGraw-Hill Education, 2020, p. 382
[171] Ibid., p. 383
[172] Ibid., p. 384
[173] "Convergence Report", European Central Bank, June 2020, accessed December 15, 2020

In order to evaluate the economic performance of the countries regarding price stability, it is important to look at the results from a broader perspective. Therefore, the author compares the inflation rates of Bulgaria and Romania not only to the reference value and to one another, but also to other Member States with a derogation, namely – Estonia (for the period of 2006-2011, when it officially adopts the euro), Croatia (since the accession in the European Union in 2013), and Hungary.

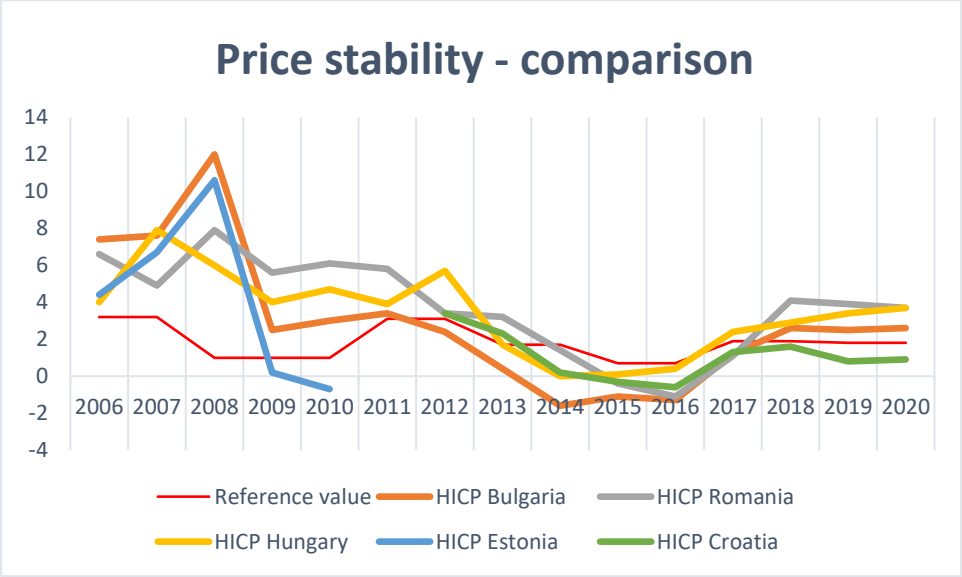

Figure 12. Price Stability - comparison. Source: own elaborations from ECB Convergence reports 2007-2020.

The red line in the figure indicates the reference value for the examined period, calculated as an annual percentage change of 3.2% for 2007, 1.0% for 2009, 3.1% for 2011, 1.7% for 2013, 0.7% for 2015, 1.9% for 2017 and 1.8% for 2019. In order to fulfill the criterion, the HICP Inflation in the countries must not be higher than the estimated value for the specific period.

It is interesting to note that at the beginning of the selected time period, no country fulfills the condition of having inflation rates below the estimated reference value. In 2009 Estonia succeeds in lowering the levels of HICP and keep them in the required state until adopting the euro in 2011. In 2012, when the first data from Croatia is published, only Bulgaria shows a low value of the inflation rate. In the period of 2014-2016, all the selected countries fulfil the price stability criteria. Since 2017, however, the only Member State showing satisfactory results regarding this condition is Croatia.

As to the main countries of study - Bulgaria and Romania, despite that they both show significantly higher estimates than the reference rate, the latter shows better results in handling the inflation than the former until 2009. Since then, however, Bulgaria outperforms Romania in terms of price stability and lowers the HICP values 3 years earlier. Both countries are meeting the price stability condition until 2017 when inflation once again exceeds the reference value by little in Bulgaria and by more in Romania.

According to the last HICP inflation rate estimates by the ECB, Bulgaria manages to lower its values from 3.4% in January 2020 to 0.4% in July 2020 and further to -0.3% in January 2021. The estimates for March 2021 are an annual change of 0.8%. In Romania, on the other side, the inflation rate experienced an increase up to 3.9% in January 2020, followed by a decline to 1.8% in May 2020 and a further increase to 2.5% until March 2021. The average rates for the euro area for March 2021 are set to 1.3% with the lowest estimates in Greece (-2.0%) and the highest in Luxembourg (2.5%).[174]

The high levels of uncertainty due to the Covid-19 crisis are not allowing for consistent and reasoned predictions for the next years. If we try, nevertheless, to calculate the reference rate for March 2021 by adding 1½% to the values of the three best performing countries in the EU – Greece with -2%, Slovenia, Portugal, Ireland, and Malta with 0.1%, and Latvia with 0.3%[175], we would receive a reference rate equal to 0.4% annual change. In such a case, at this moment, Bulgaria would fulfil the price stability criterion, while Romania would not.

Sustainability of the public finances

Regarding the fiscal developments, the Reports clarify the meaning of the "sustainability of the government financial position"[176] as follows: "Article 2 of Protocol (No 13) on the convergence criteria stipulates that: '*The criterion on the government budgetary position referred to in the second indent of Article 140(1) of the said Treaty shall mean that at the time of the*

[174] "*Measuring inflation – the Harmonised Index of Consumer Prices (HICP)*", ECB, accessed April 1, 2021, https://www.ecb.europa.eu/stats/macroeconomic_and_sectoral/hicp/html/index.en.html
[175] Ibid.
[176] Article 140, Treaty on the Functioning of the European Union, Official Journal of the European Union, C 326, vol. 55, October 26, 2012

examination the Member State is not the subject of a Council decision under Article 126(6) of the said Treaty that an excessive deficit exists'."[177]

The required fiscal discipline encompasses two equally important elements: first, the ratio of the government deficit to GDP should not exceed 3% of GDP, and second, the ratio of the government debt to GDP should not exceed 60% of GDP, "unless the ratio is sufficiently diminishing and approaching the reference value at a satisfactory pace"[178]. Both elements are evaluated carefully and in detail.

Council Regulation (EC) No 1467/97[179]and Council Regulation (EU) No 1177/2011[180] have been adopted in order to clarify the provisions under Article 126 of the Treaty and, inter alia, to allow for a 3-year transition period for the Member States who experienced the excessive deficit procedure (EDP) before 2011. The EDP is regulated in the Treaty on Stability, Coordination and Governance in the Economic and Monetary Union (TSCG) and the Stability and Growth Pact.

There are two essential parts of the fiscal rules under the SGP – the preventive and the corrective arm. The preventive arm is monitoring whether a Member State is reaching its medium-term objectives in terms of structural budget stability, set as a budget deficit not exceeding 0.5% of GDP[181]. Under extraordinary circumstances – "in periods of severe economic downturn in the euro area or in the Union as a whole", the preventive arm under the SGP suggests that "Member States may be allowed temporarily to depart from the adjustment path towards the medium-term budgetary objective …, provided that this does not endanger fiscal sustainability in the medium term"[182].

The corrective arm, on the other hand, monitors the levels of government budget deficit and public debt and in case of a breach in the set parameters, an EDP is started. There is, however, one exception for economically difficult times, when "the Council may also decide, on a

[177] "Convergence Report", European Central Bank, June 2020, accessed December 15, 2020
[178] Ibid.
[179] Council Regulation (EC) No 1467/97 of 7 July 1997 on speeding up and clarifying the implementation of the excessive deficit procedure (OJ L 209, 2.8.1997)
[180] Council Regulation (EU) No 1177/2011 of 8 November 2011 amending Regulation (EC) No 1467/97 on speeding up and clarifying the implementation of the excessive deficit procedure (OJ L 306, 23.11.2011)
[181] "Design and implementation of the European fiscal rules", Deutsche Bundesbank Monthly Report, June 2017, https://www.bundesbank.de/resource/blob/667382/cb31f8b7677d2114c89b6f4589ea7507/mL/2017-06-fiscalrules-data.pdf
[182] "Convergence Report", European Central Bank, June 2020, accessed December 15, 2020

recommendation from the Commission, to adopt a revised recommendation under Article 126(7) TFEU provided that this does not endanger fiscal sustainability in the medium term."[183] If no exceptional circumstances are noted by the Council and an EDP has been started, the country is given a period of one year to bring the budget deficit and public debt values to the required level. If the Member State fails to achieve an improvement in terms of budget stability, the Council has the powers to impose sanctions.[184]

Regarding the countries of research, Bulgaria has been a subject to an EU Council decision on the existence of excessive deficit only once – from 2011 to 2012.[185] The level of general government deficit in Bulgaria has fallen below the reference value in once again in 2014. Instead of starting a EDP, however, it is decided by the Council that the deficit in Bulgaria is "exceptional and temporary" ("defined strictly as cases in which a country experiences an annual fall in real GDP of at least 2 per cent"[186]). In this case, the Council has decided to implement the granted exception in the preventive arm of the SGP and not to proceed with an EDP against the Member State[187].

Romania, on the other hand, has far more extensive experience with the EDP since joining the EU. The first procedure against the Member State is started in July 2007. The deadline to meet the lower the levels of government deficit is extended to 2012 upon recommendation of the ECOFIN Council and is abrogated in 2013, after Romania manages to achieve a satisfactory budget deficit.[188] After 2015, however, the level of government deficit continues to sharply increase and a "significant deviation procedure under the preventive arm of the Stability and Growth Pact was thus launched in June 2017 with a view to correcting the significant observed deviation from the adjustment path towards the medium-term budgetary objective. However, between 2017 and 2019 Romania repeatedly failed to take effective action in response to the Council recommendations, prompting the European Commission to propose, and the Council to

[183] Ibid.
[184] "Design and implementation of the European fiscal rules", Deutsche Bundesbank Monthly Report, June 2017, https://www.bundesbank.de/resource/blob/667382/cb31f8b7677d2114c89b6f4589ea7507/mL/2017-06-fiscalrules-data.pdf
[185] "Convergence Report", European Central Bank, June 2014, accessed December 15, 2020
[186] Mike Artis and Frederick Nixson, "*The Economics of the European Union. Policy and Analysis*", 4th Edition, Oxford University Press, 2007, p. 299
[187] "Convergence Report" European Central Bank, June 2016, accessed December 15, 2020
[188] "Convergence Report", European Central Bank, June 2014, accessed December 15, 2020

endorse, revised recommendations with a view to correcting Romania's significant observed deviation from the adjustment path toward the medium-term budgetary objective."[189]

In April 2020, a new EDP is opened for Romania with a deadline for improvement of 2022[190]. Furthermore, Romania is selected by the European Commission for an in-depth review in the Alert Mechanism Report.[191] The European Commission explains the worsened economic condition of Romania by "marked deterioration in economic activity and the fiscal measures implemented to mitigate the COVID-19 crisis and by the significant increase in old age pensions resulting from the new pension law passed in summer 2019."[192]

In order to compare the sustainability of the public finances of Bulgaria and Romania, a simultaneous look at the indicators of both countries is required. Figure 25 below encompasses the budgetary performance of the research countries, together with the estimates for another Member State with a derogation – Hungary.

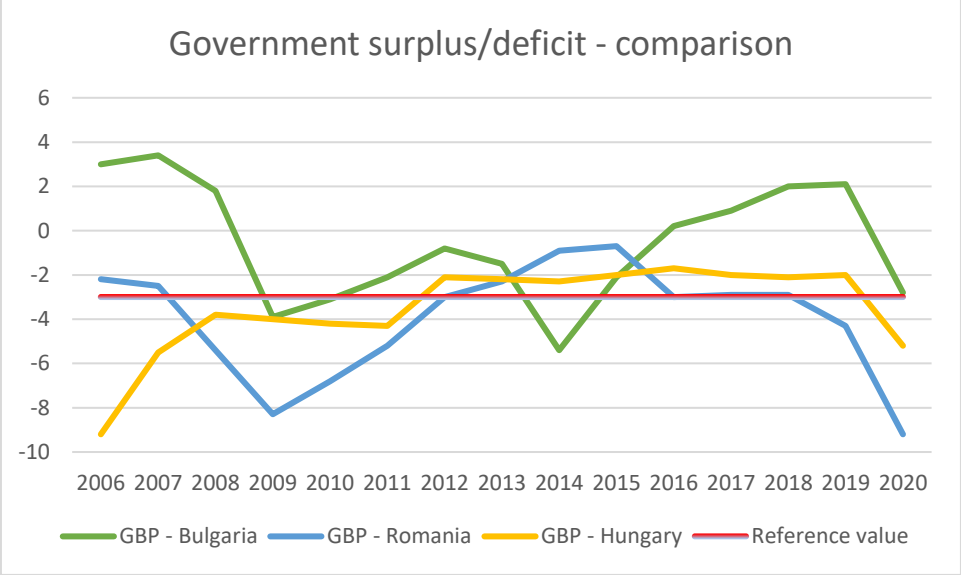

Figure 13. Government budgetary position - comparison. Source: own elaborations from ECB Convergence reports 2007-2020.

Until 2013, Bulgaria shows significantly better results than the other Member States in terms of the government deficit, while both Romania and Hungary are subject to an EDP until

[189] "Convergence Report", European Central Bank, June 2020, accessed December 15, 2020
[190] Ibid.
[191] Ibid.
[192] Ibid.

2012 with estimates lowered up to -9.2 for Hungary and -8.3 for Romania. In 2014, however, the different fiscal approach of the Bulgarian government results in values below the reference rate. As already stated, it is decided that this deterioration of the budgetary position is exceptional and temporary and an EDP is not opened.

From 2015 to 2018 all three Member States fulfill the criterion of sustainability of public finances. In 2018 the reference value is crossed by Romania, followed in 2019 by Hungary, and in 2020 by Bulgaria. The uncertainty of the near future due to the Covid-19 crisis makes it complicated to predict the development of the indicators before the next Convergence report.

The European Commission Economic Forecast for 2020 shows that Bulgaria is the only country with deficit levels below the reference value of 3% due to "the strong decline in economic activity and the fiscal measures implemented to mitigate the crisis."[193] According to the National Statistics Institute of Bulgaria, the government budget deficit has been calculated as -3.4% at the end of 2020[194]. Romania, on the other hand, reaches its lowest level in terms of budgetary position since joining the European Union, with government debt reported at -9.2% in 2020.

It is noticeable, however, that the levels of Bulgarian budget deficit remain more in line with the convergence requirements than the one of Romania for almost the entire study period, with one exception in 2014. This can be explained with different fiscal approaches undertaken by the governments of the Member States, leading to apparently different results.

In terms of general government gross debt, both Bulgaria and Romania are constantly staying below the reference value for the research period. In comparison with the other Member States with a derogation, it is evident that their performance is much more in line with the Maastricht criterion. Even with the government debt expansion in the recent years, the levels always remain below the reference rate in both countries.

[193] "Convergence Report", European Central Bank, June 2020, accessed December 15, 2020
[194] "Bulgaria And The EU: Deficit And Debt Of The Institutional Sector "Government" In 2020", National Statistical Institute, accessed March 19, 2021,
https://www.nsi.bg/sites/default/files/files/pressreleases/GFS2020p_EU.pdf

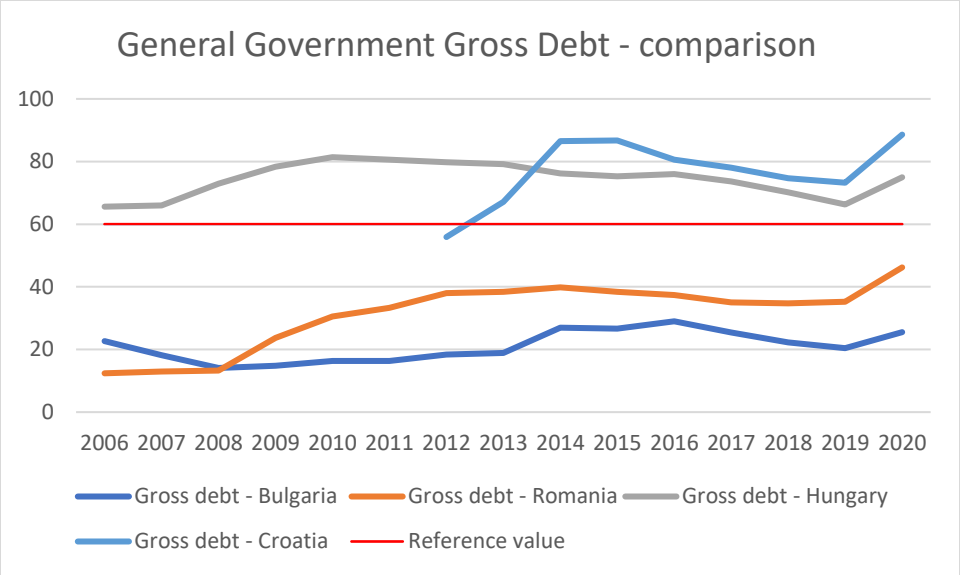

Figure 14. General Government Gross Debt - comparison. Source: own elaborations from ECB Convergence reports 2007-2020.

Another country longing to adopt the euro – Hungary, marks a consistent breach of the levels of government debt. Since 2006, Hungary has not been able to lower its debt levels below 65.6%. On the contrary, for the period until 2019, the debt levels are gradually increasing, reaching up to 80.6%. Croatia shows similar results since the accession to the EU in 2013.

Noticeably and understandably, the global pandemic forces the government debt ratios to rise even further. In Bulgaria and Romania, the levels remain below the reference value, while in Hungary and Croatia the deterioration from it is even more profound, reaching in 2020 75% and 88.6%, respectively.

It can be generalized that for the research countries the convergence criterion regarding sound and sustainable public finances is at least partially fulfilled. Other countries, such as Hungary, fail to fulfil even one of the conditions, which inevitably distances them from entry in the Euro area in the near future. Of course, a complete assessment will only be possible once the global pandemic is handled and all its negative consequences from an economic perspective are evaluated.

Durability of convergence

The criterion of the durability of convergence requires the Member States with a derogation to have certain long-term interest rate developments, namely: "*an average nominal long-term interest rate that does not exceed by more than two percentage points that of, at most, the three best performing Member States in terms of price stability.*"[195] Baldwin and Wypolsz give reasoning to this convergence criterion, stating that "Long-term interest rates mostly reflect markets' assessment of long-term inflation … Achieving a long-term interest rate therefore requires convincing naturally skeptical financial markets that inflation will remain low 'for ever'."[196]

The comparison of the durability of the convergence, i.e. the long-term interest rate, between the selected countries is once again conducted in the light of the other Member States with a derogation.

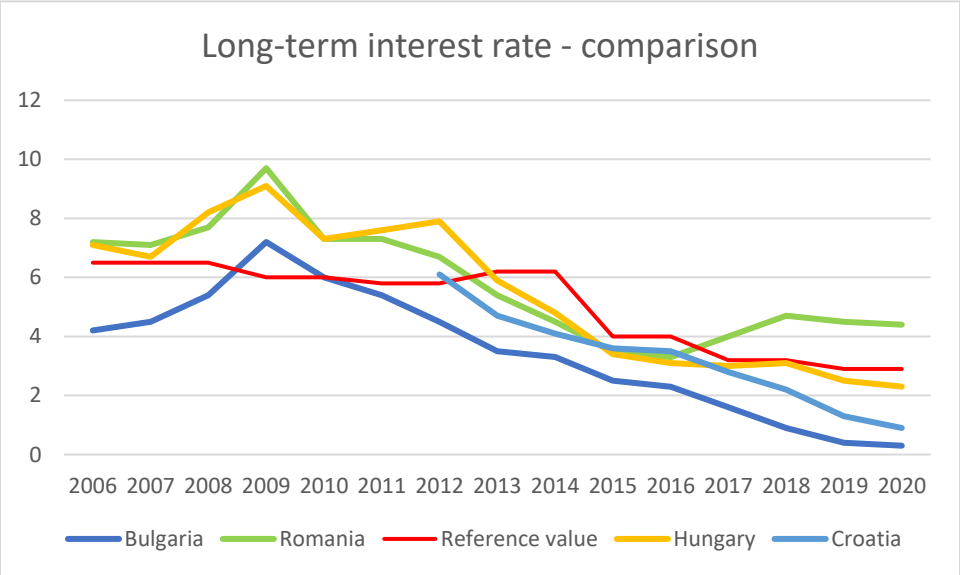

Figure 15. Long-term interest rate - comparison. Source: own elaborations from ECB Convergence reports 2007-2020.

[195] "Convergence Report", European Central Bank, June 2020, accessed December 15, 2020
[196] Richard Baldwin and Charles Wyplosz, "*The Economics of European Integration*", 6th Edition, McGraw-Hill Education, 2020, p. 385

The reference value is calculated independently for each report on a 12-months average basis and is set to be 6.5% in 2007, 6.0% in 2009, 5.8% in 2011, 6.2% in 2013, 4.0% in 2015, 3.2% in 2017 and 2.9% in the last Convergence report.

The figure above indicates that at the beginning of the research period, only Bulgaria had a long-term interest rate below the reference value. In the period 2009-2011, no Member State was fulfilling the durability of convergence criterion, since all the estimates are above the measured reference rate. From 2013 onwards, all the countries manage to lower their interest rate to the required values.

The only country currently showing values far above the threshold is Romania. The Convergence report states that the increase in the estimates, especially in 2020, is due to "the sustained inflation dynamics, sizeable current account deficit and persistent uncertainty regarding the sustainability of the government's fiscal policy."[197] The ECB Long-term interest rate statistics for the Member States, however, indicate that Romania has managed to lower the harmonized long-term interest rate since the last Convergence report, reaching 3.49% in September 2020 and 2.96% in March 2021[198].

Comparing the two countries of interest, Bulgaria seems to have a better strategy in terms of this convergence condition. Besides the Convergence reports information, the ECB Long-term interest rate statistics for the EU Member States indicate that the harmonized long-term interest rate of Bulgaria has risen temporarily to 0.68% in June 2020, after which it has fallen back to the estimate of 0.14% in March 2021[199]. It could be assumed that Bulgarian authorities have found the optimal way to keep the long-term interest rate in the required value.

[197] Ibid.
[198] "Long-term interest rate statistics for EU Member States ", ECB, accessed April 3, 2021, https://www.ecb.europa.eu/stats/financial_markets_and_interest_rates/long_term_interest_rates/html/index.en.html
[199] Ibid.

Exchange rate stability

Regarding the exchange rate developments, it is evaluated whether the country has participated in the Exchange Rate Mechanism (known as ERM II) for at least two years "without severe tensions, in particular without devaluing against the euro."[200]

The European Commission explains that "The Exchange Rate Mechanism (ERM II) was set up on 1 January 1999 as a successor to ERM to ensure that exchange rate fluctuations between the euro and other EU currencies do not disrupt economic stability within the single market, and to help non euro-area countries prepare themselves for participation in the euro area."[201] At the time of the publication of the last Convergence reports by the ECB and EC, none of the researched countries are participating in the ERM II.

The process of joining and staying in the ERM II is crucial for the potential adoption of the euro, as it prepares the participating Member States for the transfer of their monetary policy to the ECB. In this sense, after agreeing on a central exchange rate between the euro and the national currency[202], the country is deprived of the opportunity to use its monetary instruments to stabilize the economic situation. Through participating in the ERM II it is assessed whether the fiscal policy of the countries is sufficiently developed and properly constructed, as, after the adoption of the euro, it will be the only way to deal with macroeconomic imbalances on a national level.

To participate in the ERM II, the Member States are alleged to formally express its intention to enter the Mechanism and to implement certain prior commitments regarding various policy areas to the ECB and to the European Commission. The successful implementation of the prior commitments is monitored and evaluated by the two institutions prior to the decision of entering the ERM II.

On June 29, 2018, Bulgaria sends a letter of intent of entering the ERM II. In June 2020 the Commission gives its assessment of the implementation of the prior commitments in the field of non-banking financing sector, insolvency framework, anti-money laundering framework, and

[200] Ibid.
[201] "ERM II – the EU's Exchange Rate Mechanism", ECB, accessed April 03, 2021, https://ec.europa.eu/info/business-economy-euro/euro-area/introducing-euro/adoption-fixed-euro-conversion-rate/erm-ii-eus-exchange-rate-mechanism_en
[202] Ibid.

state-owned enterprises[203]. The Commission's report confirms the completion of the four prior commitments.[204] In July 2020 the ECB also confirms the fulfilment of the two prior commitments[205] and is decided for Bulgaria to be included in the ERM II on July 10, 2020.[206]

Despite the relatively recent participation in the ERM II, Bulgaria is fulfilling the exchange rate stability criterion due to the euro-based currency board established in 1997. The last Convergence report states that "Over the reference period the lev did not exhibit any deviation from the rate of 1.95583 levs per euro, which is used as a benchmark for illustrative purposes in the absence of an ERM II central rate."[207]

A currency board is an arrangement to fix the national currency to another external "anchor currency". From an economic point of view, a country operating under a currency board experiences almost the same limitations as in a currency union, as monetary policy is no longer an available instrument to handle an economic turmoil – "With a currency board in place, the central bank can no longer serve as a lender of last resort for banks in trouble"[208].

Baldwin and Wypolsz give an example of such currency agreement with Denmark, stating that "The distinction between such a policy and euro area membership is tenuous. Euro area member countries have formally given up their autonomy over monetary policy by transferring responsibility for it to the European Central Bank, and Denmark has done the same on an informal basis, Of course, Denmark is not involved in ECB decisions."[209]

This currency board arrangement, when timely and carefully implemented, brings to the pegged currency economic credibility and lowered interest and inflation rates. When the new

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[203] "Opinion on the Bulgarian ERM II", European Commission, Brussels, July 08, 2020, accessed April 02, 2021, https://ec.europa.eu/info/sites/default/files/economy-finance/com_opinion_on_bg_erm-ii.pdf
[204] Ibid.
[205] "*Bulgaria – assessment of ERM II prior commitment No. 2 on the macroprudential toolkit*", ECB, July 3, 2020, accessed on April 01, 2021, https://www.ecb.europa.eu/pub/pdf/other/ecb_assessment_bulgaria_erm_II~42b06fb4e2.en.pdf?fe0dc3cab527bacea8ac3b6b0a66a549
[206] "Communiqué on Bulgaria", European Central Bank, July 10, 2020, accessed January 10, 2021, https://www.ecb.europa.eu/press/pr/date/2020/html/ecb.pr200710~4aa5e3565a.en.html?utm_source=ecb_twitter&utm_medium=social&utm_campaign=20200710_PR_ECBBulgaria
[207] "Convergence Report", European Central Bank, June 2020, accessed December 15, 2020
[208] Anne-Marie Gulde, "*The Role of the Currency Board in Bulgaria's Stabilization*", IMF Finance Development, September 1999, Volume 36, Number 3, accessed March 15, 2021, https://www.imf.org/external/pubs/ft/fandd/1999/09/gulde.htm
[209] Richard Baldwin and Charles Wyplosz, "*The Economics of European Integration*", 6th Edition, McGraw-Hill Education, 2020, p. 306

Bulgarian government first introduces the Currency board in July 1997, its main objectives are to fight the fiscal indiscipline and the excessive levels of inflation – "On an annual basis, inflation had soared to almost 500 percent in January 1997 and surpassed 2,000 percent in March."[210] It is hoped that "Under a currency board, the central bank would lose its discretion to act, and inflation and real interest rates would drop towards the levels of those in the country issuing the anchor currency. The more credible policy environment would provide a better framework for stability and growth."[211] The anchor currency is initially set to be the Deutsche mark but is changed to the euro in 1999[212].

This seemingly experimental Currency board, together with the new banking stabilization program, the implemented organizational structure, and the newly adopted BNB Law cause an almost impossible change in the Bulgarian economic outlook.

The figure below shows the development of the macroeconomic indicators in the period of 1995-1998. It can be observed that the inflation is sharply increasing until the first quarter of 1997. Pegging the currency, however, brings the inflation levels to 1.0% in 1998, a year after the establishment of the currency board[213].

[210] Anne-Marie Gulde, "*The Role of the Currency Board in Bulgaria's Stabilization*", IMF Finance Development, September 1999, Volume 36, Number 3, accessed March 15, 2021, https://www.imf.org/external/pubs/ft/fandd/1999/09/gulde.html
[211] Ibid.
[212] Jeffrey B. Miller, "*The Bulgarian Currency Board*", Comparative Economic Studies, September 2002
[213] Anne-Marie Gulde, "*The Role of the Currency Board in Bulgaria's Stabilization*", IMF Finance Development, September 1999, Volume 36, Number 3, accessed March 15, 2021, https://www.imf.org/external/pubs/ft/fandd/1999/09/gulde.html

Macroeconomic indicators before and after Bulgaria's adoption of a currency board
(percent)

		First quarter			
	1995	1996	1997	1997	1998
Real GDP growth	2.1	—10.9	...	—6.9	3.5
Inflation[1]	32.9	310.8	2,040.4	578.5	1.0
Fiscal balance (percent of GDP)	—6.4	—13.4	—62.1	—2.1	1.3
Bank financing of fiscal balance	4.9	14.5	40.7	—3.2	—0.3
Growth in reserve money	50.5	92.4	780.0	780.0	9.8[1]
Growth in real broad money	5.1	—45.4	—75.3	—32.3	2.8
BNB credit to banks (percent change in monetary liabilities)	—7.8	122.4	67.5	4.5	—36.6
Foreign reserves including gold (million dollars)	1,546.0	781.0	826.0	2,474.0	3,056.0
In months of imports	2.9	1.6	1.7	5.1	6.1
Nominal interest rate differential[2]	19.4	116.6	128.6	0.03	0.38
Exchange rate (lev/U.S. dollar)	70.7	487.4	1,021.9	1,776.5	1,675.1
Exchange rate (lev/deutsche mark)	49.3	313.4	946.9	1,000.0	1,000.0

Source: IMF.
[1] Twelve-month change, end of period.
[2] End-of-year differential between three-month deposit rates in Bulgaria and Germany.
... Indicates data not available.

Figure 16. Macroeconomic indicators before and after Bulgaria's adoption of a currency board. Source: IMF.

After such incredible stabilization of the inflation, the Bulgarian Currency board is not discontinued. On the contrary, it is agreed that it will continue to serve its mandate even during the participation in the ERM II[214].

Romania has used another strategy in terms of exchange rate stability. According to the Banca Naţională a României, "The exchange rate regime of the leu currently in place is that of a managed float, in line with using inflation targets as a nominal anchor for monetary policy and allowing for a flexible policy response to unpredicted shocks likely to affect the economy."[215]

Baldwin and Wypolsz give the following explanation of the managed floating exchange rate regime: "Central banks buy their own currency when they consider it too weak, and sell it

[214] "ERM II – the EU's Exchange Rate Mechanism", European Commission, accessed April 02, 2021, https://ec.europa.eu/info/business-economy-euro/euro-area/introducing-euro/adoption-fixed-euro-conversion-rate/erm-ii-eus-exchange-rate-mechanism_en
[215] "Exchange rate regime of the leu ", Banca Naţională a României, accessed April 20, 2021, https://www.bnr.ro/Exchange-rate-regime-of-the-leu--3648-Mobile.aspx

when they see it as too strong, but they refrain from pursuing any particular exchange rate target. They are not making any explicit commitments but they are occasionally present on foreign exchange markets with the aim of smoothing short-term movements."[216] The inflation targeting strategy used by Romania is explained by some authors as "delegation of responsibility for medium term control over inflation to an independent central bank using interest rates as its primary instrument to influence inflationary pressure."[217] In other words, the strategy prioritizes and tries to achieve price stability over exchange rate stability.

Inflation targeting is adopted as main strategy by Romania before its accession to the EU, in 2005. Some authors state, however, that this strategy might be controversial in terms of achieving the required exchange rate stability in order to adopt the euro – "With the view of joining the Euro Area in the near future Romania faces a great challenge, that of finding a way to organize the transition from its current exchange rate regime to the irrevocable fixity of exchange rate against other Euro Area currencies, taking into consideration the need to maintain a certain level of price stability."[218]

It is questionable whether Romania will be able to maintain the inflation targeting and while participating in the ERM II: "In an environment of IT [inflation targeting] and simultaneous participation in ERM II, two monetary policy objectives exist alongside each other: a target for inflation and a target for the exchange rate. This may undermine the comprehensibility of monetary policy and affect the NBR's credibility and the effectiveness with which it performs its stabilising activities."[219]

Graphically, the comparison of the exchange rate fluctuations looks as follows:

[216] Richard Baldwin and Charles Wyplosz, "*The Economics of European Integration*", 6th Edition, McGraw-Hill Education, 2020, p. 320
[217] Marius K. Apostoaie, "*Inflation Targeting In Romania in the Perspective of Joining the Exchange Rate Mechanism II*", Timişoara Journal of Economics, Volume 4 Issue 1 (13), 2011, p.44
[218] Ibid.
[219] Ibid.

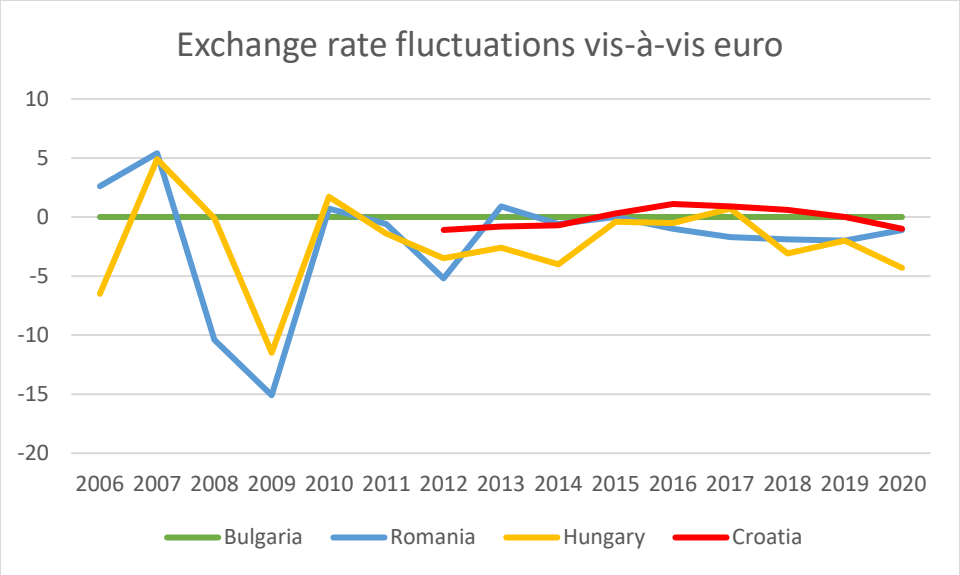

Figure 17. Exchange rate fluctuations vis-à-vis the euro - comparison. Source: own elaborations from the ECB Convergence reports 2007-2020.

Intuitively, the Bulgarian lev has not experienced any deviations from the fixed exchange rate of 1.95583 per euro, while the Romanian leu shows a significant departure in 2009 and more modest changes in recent years.

As can be seen in the Figure above, Romania experiences significant turbulences in the exchange rate fluctuations in the period of 2007-2011. After 2013, however, the Romanian currency shows a very low degree of volatility. Considering that the exchange rate stability allows ± 15% fluctuation band from the benchmark, it might be concluded that the Romanian currency seems sufficiently stable to request joining the ERM II.

It is yet interesting to state that some other Member States with a derogation show similarly low levels of fluctuations and volatility. The newest member of the EU – Croatia, has already requested participation in the ERM II in 2019. The assessment of the fulfilment of the prior commitment by the EC and ECB is positive and a decision regarding Croatia and Bulgaria joining the ERM II is granted in July 2020. Hungary, on the other side, experiences analogous fluctuations in the exchange rate as Romania until 2011 and also has not yet requested to participate in the ERM II, despite the relatively low deviations in recent years.

As already stated, Bulgaria is participating in the ERM II since 2020. Moreover, the currency board guaranteeing a stable exchange rate vis-à-vis the euro, which will continue to

operate during the two-year participation in the mechanism, allows concluding that it is only a matter of a year for Bulgaria to be fulfilling this criterion. The strategy of maintaining a stable exchange rate through a currency board and thus successfully fulfilling the Maastricht criterion has also been used by Estonia since 1992[220] and Lithuania since 1994.[221]

Romania, however, has not yet officially requested to join the ERM, and, consequently, has not implemented any prior agreements. Considering the low level of volatility and the fact that "The real effective exchange rate of the Romanian leu has depreciated slightly over the past ten years"[222], it is a political rather than circumstantial decision to (not) participate in the ERM II.

Integration of capital markets

Ingram suggests that financial integration allows "to cushion temporary adverse disturbances through capital inflows -- e.g. by borrowing from surplus areas or decumulating net foreign assets that can be reverted when the shock is over."[223] In this sense, it would be more beneficial for a county to join a currency union, if its financial market is well developed and integrated.

In order to make a complete assessment of the economic conditions in the Member States with a derogation, aside from the general convergence criteria, the EC and ECB Convergence reports are looking at other relevant factors such as the level of macroeconomic imbalances, the level of integration of markets, the developments of the balance of payments and the current account, and the developments of the unit labor costs[224]. Paul De Grauwe points out the differences in the capital markets due to the different legal frameworks, stating that "In countries with a

[220] Nikolay Nenovsky, "*The Currency Board in Estonia, Lithuania and Bulgaria: Comparative Analysis*", Economic Thought journal, Bulgarian Academy of Sciences - Economic Research Institute, issue 3, 2001, pp. 24-45
[221] Patricia Alonso-Gamo et al., "*Lithuania: History and Future of the Currency Board Arrangement*", IMF, Volume 2002: Issue 127, accessed March 10, 2021, https://www.elibrary.imf.org/view/journals/001/2002/127/article-A001-en.xml?language=en
[222] "Convergence Report", European Central Bank, June 2020, accessed December 15, 2020
[223] J.C. Ingram, "*The Case for the European Monetary Integration*", April 1973, Princeton University, Essays in International Finance, No. 98; Francesco Paolo Mongelli, "*'New' Views on the Optimum Currency Area Theory: What is EMU Telling Us*?", ECB Working Paper Series, Working Paper No. 138, April 2002
[224] "Convergence Report", European Central Bank, May 2008, accessed December 16, 2020, p. 14

continental legal tradition, firms attract financial resources mainly through the banking system. As a result, capital markets are less developed.[225]"

If we consider the potential intensification of market integration (including capital markets) in a currency union[226], it may lead to a partial diminishing of the national borders.[227] In this sense, joining a monetary union will firstly stimulate the market integration and secondly decrease the importance of the national borders. Let's now see the situation regarding the capital markets in Bulgaria and Romania.

In the time span of 2007-2020, the ECB Convergence reports are unanimous regarding the condition of the capital markets in both Bulgaria and Romania – "smaller and much less developed than in the euro area."[228] It is interesting to state, however, that the level of financial integration remains relatively low for almost all the Member States with a derogation, except for Croatia, whose capital markets are "much less developed than those of the euro area, yet they are among the most developed in central and eastern Europe"[229], and Sweden, whose capital markets, according to the last Convergence report, "are highly developed, with corporate bond issuance and stock market capitalization accounting for a higher percentage of GDP than in the euro area."[230]

The criterion of capital market integration, however, despite its presence in the OCA theory literature, is not considered one of the crucial determinants of whether a Member State with a derogation is ready to enter the Eurozone. On the contrary, before adopting the euro, Estonia also shows low levels of financial integration[231]. This may point to the conclusion that once embedded in the monetary union, the spillovers of the capital market integration to a certain extent assist entering countries to further develop their stock market capitalization and corporate debt securities.

[225] Paul de Grauwe, "*Economics of Monetary Union*", 12th Edition, Oxford University Press, 2018, p. 22
[226] Ibid., p. 28
[227] Ibid., p.26
[228] "Convergence Report", European Central Bank, June 2020, accessed December 15, 2020
[229] "Convergence report", European Central Bank, June 2014, accessed December 20, 2020; "Convergence Report", European Central Bank, June 2020, accessed December 15, 2020
[230] "Convergence Report", European Central Bank, June 2020, accessed December 15, 2020, p.155
[231] "Convergence report", European Central Bank, May 2010, accessed December 20, 2020

Compatibility of legislation (legal convergence)

With regard to the legal compatibility, it is stated in the last Convergence report that "The compatibility of national legislation is considered in the light of legislation enacted before 24 March 2020."[232] It is clarified that the "country assessments report only on those provisions of national legislation which the ECB considered to be problematic either from the perspective of an NCB's independence within the ESCB or from the perspective of its subsequent integration into the Eurosystem."[233]

It is assessed by the ECB Convergence reports in the examined period that the Bulgarian legislation is not sufficiently compatible with the requirements of the legal convergence. Multiple areas have been pointed as inconsistent with the provisions of the Treaty and the Statute.

Over the observed period, the Bulgarian NCB has shown significant progress in terms of achieving functional and institutional independence[234]. The principle of personal independence, however, is not fully achieved through the Bulgarian Law on the prevention of disclosure of conflicts and interests. Furthermore, the provisions of the BNB Law regarding personal independence are not fully in line with the ECB requirements, "The Law is silent with regard to the right of national courts to review a decision to dismiss any member (other than the Governor) of the NCB's decision-making bodies who are involved in the performance of ESCB-related tasks. Even though it may be said that this right is available under the general law, for legal certainty reasons it could be advisable to provide specifically for such a right of review."[235]

Bulgarian legal framework is further found incompatible with the ECB requirements regarding the legal convergence in the areas of professional secrecy, monetary financing and privileged access[236]. The competencies of the ECB in the fields of monetary policy and implementation instruments, collections of statistics, official foreign reserve management,

[232] "Convergence Report", European Central Bank, June 2020, accessed December 15, 2020
[233] "Convergence Report", European Central Bank, May 2008, accessed December 15, p. 229
[234] "Convergence Report", European Central Bank, June 2020, accessed December 15, 2020
[235] "Convergence Report", European Central Bank, May 2008, accessed December 15, p. 229
[236] "Convergence Report", European Central Bank, May 2012, accessed December 15

payment systems, sanctions, and issue of banknotes is not recognized by the Bulgarian legislator[237].

From 2010 onwards, the convergence reports constantly conclude that there are no major (or only limited) changes made in the Bulgarian legislation regarding ECB's recommendations. In 2018, the new Law on counter-corruption and unlawfully acquired assets forfeiture is adopted to replace the Law on the prevention of disclosure of conflicts and interests. This new law, however, is also found incompatible with the provisions of the Treaty and the Statute.[238]

In 2020, the ECB Convergence report asserts that "multiple changes in relation to the points identified in the ECB's Convergence Report of May 2018, also addressing some of the recommendations made in previous convergence reports" can be observed. The overall assessment, however, implies that the legal framework of Bulgaria still fails to be sufficiently compatible with the relevant legal framework of the EU. It is evident that some progress has been made in the period from 2007 to 2020 but in order to achieve a complete economic convergence, the Bulgarian legislation needs to be further amended and extended, especially in regards to achieving personal independence and recognizing the powers of the ECB.

The situation in Romania does not look very different. Since the first Convergence report after the accession to the EU, the country has shown only limited changes in legislation regarding the recommendations of the ECB.

As in Bulgaria, the Romanian BNR Law is in line with the principle of functional independence.[239] It is stated, however, that the provisions of the national legislation are incompatible with the principles of institutional and financial independence.[240]

The Romanian legal framework is found greatly incompatible with the ECB requirements regarding the monetary financing and specifically the prohibition of direct purchases on the primary market[241]. Moreover, the formulation of Article 26 of the Law on BNR providing exceptional granting of loans to credit institutions with no securities or secured with "assets other

[237] Ibid.
[238] "Convergence Report", European Central Bank, May 2018, accessed December 15, 2020, p. 167
[239] Article 2(1), Law No 312/2004 on the Statute on the Banca Naţională a României, Monitorul Oficial al României, Part One, No 582, June 6, 2004
[240] "Convergence Report", European Central Bank, May 2008, accessed December 15, p. 246
[241] Ibid., p. 247

than assets eligible to collateralize monetary policy operations" of BNR "do not provide sufficient safeguards to prevent such lending from potentially breaching the monetary financing prohibition contained in Article 101 of the Treaty, especially given the risk that such lending could result in the provision of solvency support to a credit institution experiencing financial difficulties, and should be adapted accordingly." [242] Furthermore, Article 43 of the Law on the BNR regulating the distribution of net revenues does not correspond to the spirit of the Treaty and the Statute.[243]

With regard to the legal integration of the BNR into the Eurosystem, the ECB Convergence Reports find the Romanian legal framework to be consistently incompatible with the relevant Treaty and Statute provisions. It is stressed that Article 2(3) of the Law on BNR, obliging the Bank to "support the State's general economic policy", is incompatible with the secondary objectives in terms of economic policies in the Community as a whole.[244] Furthermore, the competencies of the ECB in the fields of monetary policy and implementation instruments, statistics collections, official foreign reserve management, payment systems, and issue of banknotes, as well as in the areas of independent audit, financial reporting, sanctions, and exchange rate policies, are not recognized in the Romanian legal framework.[245] The limited changes made in the period are insufficient for Romania to fulfil the legal convergence criterion.

In terms of legal convergence, both Bulgaria and Romania show strong resistance to accept the ECB recommendations and to bring their legislation in compliance with the Statute and the Treaty.

Bulgaria has shown improvement in respect to the functional and institutional (and partially in the personal) independence principles, while Romania has not yet achieved nor institutional, nor financial, nor personal independence of its NCB.

Both countries show similar and not sufficiently compatible formulation of the provisions regarding professional secrecy. In the areas of monetary financing, privileged access, and

[242] Ibid., p. 247
[243] Ibid., p. 247
[244] "Convergence Report", European Central Bank, May 2008, accessed December 15, 2020, p.248; "Convergence Report", European Central Bank, June 2020, accessed December 15, 2020,
[245] "Convergence Report", European Central Bank, June 2020, accessed December 15, 2020, p. 249

generalized legal integration into the Eurosystem, there is much to be improved. And while Bulgaria has made multiple but to a lesser extent significant changes in the legislation in the past years, Romania has not shown any progress in adapting its legal framework to the ECB requirements in the past 7 years.

It is difficult to measure which Member State shows better indicators in terms of legal convergence, considering the numerous amendments yet required.

9.3. Public sentiments

The economic and legal conditions of the countries is undoubtedly of great importance in deciding whether they should form, join or apply for membership in a monetary union. On the other hand, also a crucial factor is the political position of the state, which is often and to a large extent influenced by the public sentiments towards the development of the state.

In this Chapter, the author takes a slightly different approach and tries to analyze the accession of Bulgaria and Romania to the Eurozone from the point of view of public sentiments in the countries. The reason for examining this issue is that the decision to adopt a common currency is, despite directly related to the economic performance of the country or its readiness to give up its monetary policy in the name of deeper integration, ultimately is strictly political. In this sense, even if a country hypothetically meets all the OCA or EU convergence criteria, the political decision may be not to adopt a common currency because of the public opinion that it would not be beneficial for the nation.

According to the Flash Eurobarometer Analytical report of 2007[246], 35% of the respondents are against introducing the euro. 33% are happy rather than unhappy with the replacement of the national currency with the euro, while the rather unhappy ones are 45%. 47% of people believe using the euro will make the nation feel more European. The same percentage is shown regarding the fear of losing part of the national identity with the abandoning of the Bulgarian lev. At the same time, 78.5% of the interviewed believe that the introduction of the euro will increase domestic prices.

[246] "*Introduction of the euro in the New Member States*", Wave 5, Flash EB Series #207, May 2007

The data from 2010 [247] shows that 50.5% out of 1006 interviewed Bulgarians are rather happy that the euro will replace their national currency, while only 39.6% are rather in favor of introducing the euro. The general support for introducing the euro is estimated to 53% in Bulgaria in 2012[248] and 51% in 2014[249]. In 2016, there is a decrease to 47% of general support for the euro introduction,[250] followed by a slight increase to 50% in 2018.[251] In 2019 and 2020 47% and 48%, respectively, of the responders, are rather in favor of replacing the local currency with the euro. Only 27% of the interviewed consider Bulgaria to be ready for adopting the common currency in 2020.[252]

The percentage of responders in Romania against introducing a common currency is 21%[253]. The percentage of happy rather the unhappy responders regarding the replacement of the Romanian leu with euro are 59, while rather unhappy are 24%. Also 59% of the responders believe that using the euro will make people feel more European, and the same percentage of respondents fear losing a great deal of national identity with the adoption of the euro. The domestic prices are going to increase upon the adoption of the euro according to 55.4% of the surveyed[254].

In 2010, 55.4% out of 1012 interviewed Romanians show rather happy attitude towards the adoption of the euro. The percentage of people rather in favor of introducing the euro is 53.8.[255] 64% of the respondents show general support for the introduction of the euro in 2012.[256] The estimates increased to 74% in 2014.[257] The level of general support for the euro adoption has again

[247] "*Introduction of the euro in the New Member States*", Wave 10, Flash EB Series #296, May 2010
[248]"*Introduction of the euro in the more recently acceded Member States*", Flash Eurobarometer 349 – TSN Political and social, July 2012
[249] "*Introduction of the euro in the more recently acceded Member States*", Flash Eurobarometer 400 – TSN Political and Social, June 2014
[250] "*Introduction of the euro in the Member States that have not yet adopted the common currency*", Flash Eurobarometer 440, April 2016
[251] "*Introduction of the euro in the Member States that have not yet adopted the common currency*", Flash Eurobarometer 465, Brussels, May 23, 2018
[252] "*Introducing the euro is seen as positive for the euro area countries*", Eurobarometer 487, Brussels, July 31, 2020
[253] "*Introduction of the euro in the New Member States*", Wave 5, Flash EB Series #207, May 2007
[254] Ibid.
[255] "*Introduction of the euro in the New Member States*", Wave 10, Flash EB Series #296, May 2010
[256] "*Introduction of the euro in the more recently acceded Member States*", Flash Eurobarometer 349 – TSN Political and social, July 2012
[257] "*Introduction of the euro in the more recently acceded Member States*", Flash Eurobarometer 400 – TSN Political and Social, June 2014

fallen to 64% in 2016[258], followed by a slight increase to 69% in 2018. [259] The estimates have fallen to 61% and 63% in 2019 and 2020, respectively. The number of respondents who believe Romania is ready for the euro adoption in 2020 is 32%.[260]

It is important to note, however, that the number of the interviewed Bulgarians is relatively small in the examined period, which might not reflect correctly the overall sentiments in the Bulgarian society. In Romania, the small number of interviewed may also lead to misleading conclusions regarding the public sentiments.

The reasons for such public sentiments are various. On one hand, the estimates can be relatively low due to distrust in the EU and/or its institutions or distrust in the local government, the fear of rising prices during the changeover, losing part of the national identity or control over national economic policy, personal inconvenience, or just general skepticism regarding the common currency. On the other hand, adopting the euro may bring positive consequences such as feeling "more European" (greater integration within the EU), lower interest and inflation rates, sounder public finances, and stimulation of employment and growth.

The data from Eurobarometer for Bulgaria and Romania for the period of 2007-2020 is be graphically presented as follows:

[258] "*Introduction of the euro in the Member States that have not yet adopted the common currency*", Flash Eurobarometer 440, April 2016
[259] "*Introduction of the euro in the Member States that have not yet adopted the common currency*", Flash Eurobarometer 465, Brussels, May 23, 2018
[260] "*Introducing the euro is seen as positive for the euro area countries*", Eurobarometer 487, Brussels, July 31, 2020

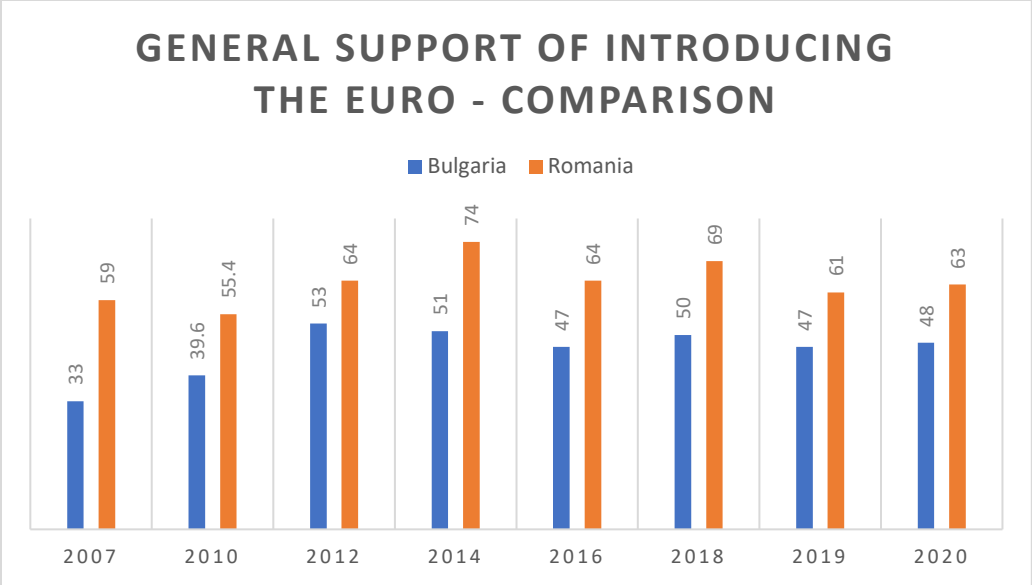

Figure 18. General support of introduction of the euro - comparison. Source: own elaboration from Eurobarometer reports 2007-2020.

It is interesting to observe that the level of general support of introducing the euro in Romania is significantly higher than in Bulgaria over the observed period, reaching up to 74% in 2014, while the highest rate for Bulgaria is 53% in 2012. Comparing the starting and the ending point of the research period, the values in both countries have improved, with 15% in Bulgaria and with 4% in Romania.

As already mentioned, the rationale behind these estimates can be various. It is yet to be considered that public sentiments can affect the political decisions of the country by putting pressure on the government. Considering the recent accession of Bulgaria to the "waiting room" of the Eurozone, the levels of public support for introducing the euro are surprisingly low, as well as the responders' evaluation of the readiness of Bulgaria to adopt the euro (only 27% believe the country is economically ready to integrate into the Eurozone). A possible explanation for such estimates is the fact that 57.8% of the interviewed nationals expect significant inflation after the adoption.[261]

[261] "*Two-thirds of Bulgarians do not want the euro, a survey shows*", Investor BG, April 02, 2019, accessed arch 12, 2021, https://www.investor.bg/nachalo/0/a/dve-treti-ot-bylgarite-ne-iskat-evroto-pokazva-prouchvane-279930/

Estat – a research and consulting company that has conducted the survey states that "It is obvious that the majority of the population does not share the government's enthusiasm for the adoption of the European currency."[262] Another survey conducted by the Expert club for economics and politics shows that 51% of adult Bulgarians want a referendum regarding the Bulgarian entrance in the Eurozone, and only 19% of the population supports the euro adoption at the end of 2019.[263]

It is questionable, however, whether governments take into account the public sentiments to the required extent – according to the collected data, in 2014 Romania shows fulfilment of all the economic convergence criteria and a high level of public support for the adoption of the euro. The political decision, however, of requesting to participate in ERM II has not been made and the opportunity for deeper EU integration sooner than later is wasted.

In February 2021, the Romanian Prime Minister Florin Citu states that "Romania aims at adopting Euro in 2027-2028", since "the former goal of adopting the Euro in 2024 is no longer accomplishable"[264]. The evaluation of the current economic condition of Romania is that "By 2027 or 2028 when, hopefully, Romania will be invited to join the ERM-2, Bulgaria and Croatia will have had more than 6-7 years of financial stability with the Eurocurrency."[265]

10. Empirical findings

Distinguished similarities and differences

After analyzing each criterion separately, it is possible to draw a conclusion about the similarities and differences between the economic and legal performance of the two countries. The degree of labor mobility and wage-price flexibility in both Bulgaria and Romania is estimated to

[262] Ibid.
[263] "*Social and political attitudes of Bulgarians towards the euro and the lev* ", Expert Club for Economics and Politics, January 2020, accessed March 12, 2021, https://ekipbg.com/wp-content/uploads/2020/01/EKIP_Doklad_Sociologia_Evro_2020-01.pdf
[264] „ *Romania and the Euro – Adoption of the Eurocurrency Postponed Once More*", Valahia.news, February 20, 2021, accessed April 12, 2021, https://valahia.news/romania-and-the-euro/
[265] Ibid.

be higher than the EU average level. In terms of the OCA criteria, both countries also show similar results in the level of fiscal integration, synchronization of business cycles, homogeneity of preferences, and even product diversification (although Romania shows slightly better results than Bulgaria in this respect).

In the perspective of the Maastricht criteria, the selected countries show an equally satisfactory level of debt-to-GDP ratio, equally unintegrated and underdeveloped financial markets, and almost equal incompatibility of national legislation with ECB requirements.

Different values stand out in the two countries in terms of the level of openness of the country, as Romania is considered less open to trade than Bulgaria, and in trade flows, where Romania is performing better than Bulgaria.

Inevitably, the different monetary policies adopted also highlight the differences in the indicators examined by the ECB when assessing the convergence of Member States with a derogation. Bulgaria reports a better /but still insufficient/ level of convergence in terms of price stability, deficit and surplus ratio, long-term interest rate, and exchange rate stability than its northern neighbor.

It is interesting to note that the two countries have paradoxically exchanged places in terms of public sentiments - Bulgaria shows a clearer political desire and perseverance in adopting the euro with lower support from the society, while in Romania high public support contrasts with the reluctance of the government to take decisive and consistent steps towards joining the Eurozone.

Fitness of the OCA theory

Regarding the costs and benefits of entering a currency union, some authors state that "For an open, diversified economy, the benefits of joining a monetary union in terms of gains in liquidity and financial stability can offset the additional adjustment costs that could result from its joining the union."[266] At the same time, "This problem of inconclusiveness is compounded by the fact that the criteria are difficult to measure unambiguously and, therefore, cannot be formally weighed

[266] Alexandre Swoboda, "*Robert Mundell and the Theoretical Foundation for the European Monetary Union*", IMF, December 13, 1999, accessed March 15, 2021, https://www.imf.org/en/News/Articles/2015/09/28/04/54/vc121399

against each other."[267] In this sense, the OCA criteria for joining a monetary union can be considered collectively, individually, or in any variation depending on the available data and the aim of the study.

For the purpose of the present Thesis, the author has considered various criteria to gain a clearer idea of the overall economic performance of the two countries and to be able to give a more specific answer to the question of whether Bulgaria and Romania are equally ready to join the Eurozone and whether this would be equally beneficial for them.

Relevance to the hypothesis and answer of the research question

In view of the analysis made, the author finds that the data obtained are relevant and sufficient to answer the research question and to test the proposed hypothesis. Before giving a final and conclusive statement, the sub-questions posed at the beginning of this Thesis should be considered.

The current economic conditions in the examined countries are explained in detail in the previous chapter both in the light of the OCA theory and the EU Convergence requirements. Multiple conclusions towards the economic performance of the countries have been presented, together with the rationale behind them.

From the perspective of the OCA theory, considering the findings of the author, it could be said that it rather makes sense for both Bulgaria and Romania to join a currency union. Certainly, the arguments for the opposite can also be found in the results, especially considering the low level of trade openness in Romania and the lower degree of imports and exports in Bulgaria. The judgement of whether the countries are suitable to adopt a common currency largely depends on the criteria the researcher is focusing on. If the degree of openness is considered of crucial importance, then Romania would not be qualified as a suitable member of a currency union. Respectively, from the prism of the trade flows, Bulgaria would need more time to develop before joining an OCA.

[267] George S. Tavlas, "*Benefits and Costs of Entering the Eurozone*", Cato Journal, Volume 24, p.89–106 (2004)

Considering the overwhelmingly positive results for both countries in terms of economic criteria (labor mobility, wage-price flexibility, business cycle synchronization, product diversification), as well as political ones (homogeneity of preferences and fiscal transfers, the author concludes that both countries are ready to join a currency union and it would be economically beneficial for both of them to adopt a common currency.

In terms of the required convergence within the EU, however, both countries do not fulfil all of the Maastricht criteria and are not considered as ready or suitable to adopt the euro. Although significant progress has been achieved in the selected period, both Bulgaria and Romania have much yet to amend, adapt, and accomplish before they become members of the Eurozone. In light of individual economic performance, Bulgaria seems to be one step closer to adopt the euro than Romania.

The legal frameworks of both countries show a significant degree of incompatibility with the EU and ECB requirements, which further distances the countries from joining the euro area. In this sense, in addition to pursuing specific economic goals and achieving stable macroeconomic results, both countries should make efforts to adapt their legislation and recognize the supranational primacy of the ECB before being admitted to the Euro area.

On the one hand, the synchronization of national legislation with European legislation is something that depends entirely on the will of the government, i.e. this criterion is rather politically oriented. On the other hand, it is obviously politically difficult for both countries to come to terms with the transfer of national competencies in the field of monetary governance into the hands of a higher authority. It is interesting to note that the changes in the legal framework, although theoretically easier to achieve, are proving to be equally difficult in practice for both Bulgaria and Romania.

Taking into account that in terms of EU convergence, Bulgaria and Romania show only limited similarities in the fields of market integration and legal compatibility, it could be generalized that exactly the similarities between them in terms of economic and legal convergence similarly hinder their accession to the euro area. On the other hand, however, the differences shown in terms of price stability, sustainability of public finances, durability of convergence, and exchange rate stability due to different political approaches adopted lead to a different performance

of the countries. In this sense, the political desire of Bulgaria to adopt the euro can be seen as a self-fulfilling prophecy and the country has a legitimate opportunity to be the next member of the Eurozone. Romania, with its political hesitation regarding the currency union, shows corresponding results and is economically far away from a common currency.

It is hypothesized in this Thesis that considering the current economic conditions and their development over time and despite the different monetary policies adopted, both Bulgaria and Romania show significant similarities to conclude that they both are ready to join a currency union, specifically – the Eurozone, and it would be economically rational and beneficial for both of them to adopt the euro. After conducting a detailed analysis of many economic variables and indicators, the author considers the hypothesis to be proved by the described findings. It must not be forgotten, however, that the readiness and the potential benefits for the countries of joining a currency union is presented in the light of the OCA criteria and not the Maastricht ones. From a theoretical point of view, both countries show significant similarities and satisfactory achievements in various economic criteria, however, not the ones assessed by the ECB.

Limitations

It should be noted that the conducted research has various limitations, including the reasons for possible differences in the economic development of countries in a given period or certain exogenous and/or endogenous factors affecting their legal or economic performance.

The ongoing global Covid-19 crisis, aside from causing sharp deterioration in the economic performance not only of the researched countries but of all existing economies, contributes to the extreme level of uncertainty regarding future socioeconomic developments. As stated in the last Convergence report, the impact of the global Covid-19 pandemic is considered in a very limited manner due to the high uncertainty about the actual economic consequences at the time of issuing the report.[268] The impacts of the pandemics and the amplitude of the negative economic consequences thereof will only be an object of a complete and adequate assessment only when the health situation is stabilized worldwide.

[268] "Convergence Report", European Central Bank, June 2020, accessed December 15, 2020

The present analysis is focused on the data itself and the relative change of the indicators and not on the explanations of the influence of exogenous factors such as health crises, wars, or political decisions. The analysis relies heavily and exclusively on the existing relevant data, as well as its quality, therefore it might be subject to unintentional bias remaining outside of the scope of the author. Further limitations in the scope of the empirical analysis have been described upon assessment of the indicators.

11. Conclusion

The present thesis examines in detail the economic development of Bulgaria and Romania from the moment of their accession to the European Union until the end of 2020. After evaluating all the selected criteria, several conclusions can be drawn.

First, remarkable progress has been made by both countries in terms of their economic development. Almost all of the examined indicators show a significant improvement – implying the good impact of the EU with its support, stimulation of growth, development, and deeper integration, as well as the spillovers of knowledge and resources leading to significant modernization and technical progress in the region. Even without being members of the Eurozone, both countries have improved their standard of living, which only leads to positive expectations for the future.

Secondly, the different monetary policies of the countries do not lead to noticeable differences in the economic indicators studied in the perspective of the OCA theory. It is interesting to trace how the two countries are starting their journey in the EU together and seem to be moving forward together at a moderate but confident pace. It is not entirely clear whether these similarities are caused by the regional positioning of the countries next to each other, due to cultural/religious similarities or other reasons, but a certain extent of synchronization in the achieved results is obvious.

Thirdly, considering only the OCA criteria, it could be said that it makes clear sense for the countries to unite in a monetary union. Some of the indicators even show better values than those of other EU Member States and even in the Eurozone - the level of factor mobility and wage-

price flexibility are considered to be the most defining criteria of the OCA, and in both countries, these estimates are significantly higher than in the Union. In view of these criteria, it can be firmly concluded that the countries are ready and fully eligible for a common currency.

Fourthly, the stark contrast between the results in the OCA criteria and the ECB convergence criteria cannot go unnoticed. Looking only at the latter, the two countries undeniably show an insufficient level of development and integration to be accepted in the euro area.

It should be recalled here that the Eurozone, according to most scientists, does not qualify as an OCA. For this reason, the criteria set out in Maastricht do not give a correct picture of the economic stability or development of countries. In this sense, the criteria for convergence seem to be built not in favor of the states, but for the common good - and the accession to the monetary union assesses not whether a country is ready to join and whether this would lead to greater integration and prosperity, but rather whether this country will not be a burden on the Union and compromise the ECB's sustainable principles, particularly price stability. From this point of view, neither Bulgaria nor Romania have shown satisfactory results and there is still much to be expected from them in the coming years.

On the other hand, the European Union is built in a binding way for the member states - in this sense, even if for Bulgaria and Romania now make sense from an economic point of view to join a monetary union, the agreement with the EU obliges them to reach a new and different level of economic stability before entering a concrete currency union - the Eurozone.

Whether and when Bulgaria and Romania will adopt the euro remains to be seen in the coming years. Many external, as well as internal factors, should be taken into account in the assessment of future developments. First, the ongoing health crisis introduces a huge level of uncertainty regarding the global economic environment and it is difficult to make predictions and conclusions before it is fully contained.

Second, the entry of Member States into the euro area depends also to varying degrees on both political and social will. In this Thesis, we saw that Bulgaria and Romania show a paradoxical difference in terms of public attitudes towards the euro. In Bulgaria, the reluctance of the people to change currency may be mainly due to reasons related to the very mentality and beliefs of the people - most Bulgarians, even for more than a decade enjoying the status of Europeans, remain

skeptical of the European Union, and to a much greater extent to their own politicians and rulers, whose decisions are almost always perceived with dissatisfaction. The public attitude is additionally affected by the fact that the information about the transition from the Bulgarian lev to the euro, as well as the benefits of eventual accession to the euro area, is not widespread enough and many people adhere to the delusion that after the introduction of the euro prices will double but salaries will be reduced by half.

In Romania, the political reluctance to join the eurozone could be explained by the resistance to putting the national monetary policy in the hands of a higher institution, which makes the country significantly more dependent in economic terms.

In all cases, it could be only hoped that the delusions in both countries will be exposed, the population will be sufficiently informed to be in line with the political inclination in the country, and the economic situation will only continue to improve in the near future, allowing for Bulgaria and Romania to become an even more integrated part of the cohesive family of the Eurozone.

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