Mendel University in Brno
Faculty of Business and Economics

Euro adoption in Serbia

Bachelor thesis

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Abstract

Papić, D. Euro adoption in Serbia. Bachelor thesis. Brno: Mendel University, 2017.

Serbia has the highest Euroisation index in South-Eastern Europe. Euro is heavily used in the domestic economy, because people lost trust in national currency. This bachelor thesis deals with monetary integration in Europe, conditions needed for accession to the Eurozone, as well benefits and costs of Euro area membership. On the base of the analysis with regards nominal and real convergence, the thesis tries to answer the question whether Serbia should consider Euro adoption as a solution for reaching long-term economic stability. After evaluation of monetary strategy, the recommendations are proposed.

Keywords

Euro adoption, Euroisation, convergence, Maastricht criteria, Optimum Currency Area theory

Abstrakt

Papić, D. Zavedení eura v Srbsku. Bakalářská práce. Brno: Mendelova univerzita v Brně, 2017.

Srbsko má nejvyšší Euroizační index v jihovýchodní Evropě. Euro je silně využíváno v domácí ekonomice, protože lidé ztratili důvěru v národní měnu. Tato bakalářská práce se zabývá měnovou integrací v Evropě, podmínkami potřebnými pro vstup do Eurozóny, výhodami a náklady na členství v Eurozóně. Na základě analýzy nominální a reálné konvergence se práce snaží odpovědět na otázku, zda by Srbsko mělo považovat přijetí eura za řešení pro dosažení dlouhodobé ekonomické stability. Po zhodnocení měnové strategie jsou navržena doporučení.

Klíčová slova

Zavedení eura, Euroizace, konvergence, Maastrichtská kritéria, teorie optimální měnové oblasti

Content

1 Introduction, goal and methodology

1.1 Introduction

Serbia officially applied for European Union membership on 22 December 2009 and received full candidate status on 1 March 2012. The state moved on to formal membership negotiations in January 2014. This is a very long process that usually lasts 6 to 10 years. While the Government hopes the country would be able to complete the accession process by 2020, the perception of the EU among people changed over time. There are numerous discussions about all possible alternatives to the EU.

The Euro adoption was also one of the most discussed topics in previous years, especially during the financial crisis in 2008 and 2009. Citizens of Serbia lost trust in national currency after years of dealing with unstable inflation. According to the calculations of Oesterreichische Nationalbank (OeNB), Serbia has the highest index of unofficial Euroisation in the region of South Eastern Europe, followed by Croatia, Macedonia, Bulgaria and Bosnia and Herzegovina. All bigger purchases that involve purchase of real estate are done in Euro. Because of the exchange rate difference citizens are often at a loss, so they consider Euro like a good option.

Candidate countries - Albania, Bosnia and Herzegovina, Macedonia, Montenegro and Serbia are seeking to join the European Union. Serbia is at the very beginning of the path to the European Monetary Union. Macroeconomic reforms just started and a lot of requirements and changes need to be carried out. Countries from this part of Europe are still facing a lot of economic issues. Major causes of these problems are flaws in economic policy, especially monetary and fiscal policy. In recent years, the idea about letting these countries to adopt Euro was widely spread. Many politicians and economists consider this option like a way out. The objective of Euro adoption is clearly articulated by most EU countries, but it is arguable whether this solution would ensure more benefits than harm for the countries in transition. Some experts, led by idea of Montenegro which adopted

Euro unilaterally, believed that giving up the national currency would solve all macroeconomic imbalances. The Europe is quite carefull when it comes to single currency and there are strict rules and reforms required to be undertaken in order to find path to convergence and eliminate costs of joining the EMU.

Opinions of both economic experts and political leaders are divided. While some of them think that Euro adoption is the only way to achieve macroeconomic stability, others also believe that Dinar should remain a national currency and that anything else would cause more harm than benefit. When it comes to experts from National Bank of Serbia, they share the opinion that despite of many advantages that would be beneficial for the country, Euro adoption cannot happen in the near future. Moreover, Serbia is making significant efforts to reduce the use of foreign currencies in domestic financial system and strengthen the national currency.

1.2 Goal of a thesis

Ensuring a relatively high degree of economic convergence before adopting the single currency and not just meeting the Maastricht criteria is essential for successful Euro area participation. The main goal of the thesis is to determine whether Serbia should adopt Euro unilaterally in order to achieve macroeconomic stability or continue with Dinarisation strategy, i.e. promotion of national currency. Firstly, the readiness of Serbia to adopt Euro from the point of view of fulfillment of Maastricht criteria needs to be carried out. Part of the main goal is also to identify the level of real convergence of Serbia with Eurozone. Comparison of Serbia with selected countries will be provided.

In order to meet the thesis objectives, two questions can be set up:

"Does Serbia fulfill Maastricht criteria?"

"What is the degree of economic alignment of Serbia with Euro area?"

1.3 Methods and structure of a thesis

For the elaboration of a thesis, descriptive method is used when presenting theoretical facts related to the examined problem. Gathered information is a basis for analysis that is concentrated on possible effects of single currency adoption. Comparative method is used to identify the difference between economic situation before and after Euro adoption in Montenegro, and when comparing levels of preparedness of Serbia and other selected countries to adopt Euro.

Further techniques used are standard statistical and econometric methods such as descriptive statistics of HICP and CPI inflation and correlation analysis which describes the relationship between countries and level of real convergence. Deduction serves as a way to create conclusion based on empirical results.

The thesis is divided into six chapters. The first chapter is devoted to introduction, goal and methodology of thesis. The second chapter deals with the literature review and provides a theoretical background needed for better understanding of research problem and contents five subchapters. They are focused on the Optimum Currency Area, the process of monetary integration in Europe, conditions needed for accession to the Euro area, benefits, costs and risks of EMU membership. Part of second chapter also discuss the possibility of unilateral adoption and the case of Montenegro is presented as an example of country which adopted Euro unilaterally.

In the practical part, the assessment of nominal and real convergence with the use of data from Eurostat and national statistics is carried out. Nominal convergence, also known as Maastricht criteria, is assessed from the point of view of Serbia and its current fulfilling. This criteria analysis covers the period from 2005-2015 and also includes other countries chosen for the comparison with Serbia and better assessment of its standing in the process of monetary integration. Real convergence covers the comparison of GDP per capita in PPS of selected countries

in a relation to the Euro area average. The correlation analysis of real GDP growth are used as a method for describing the relationship between chosen countries and Euro area. The level of economic alignment is also analyzed when comparing rate of employment, economic structures and share of trade with EU. Afterwards the monetary strategy of Serbia is analyzed. The results obtained are discussed in the fifth chapter and recommendations are proposed. The sixth chapter concludes.

2 Theoretical Background

At the European Council held at Maastricht, in December 1991, European leaders agreed the new Treaty on European Union which contained the provisions necessary for EMU implementation. It took almost 10 years of preparations, before Euro was finally launched on 1 January 1999. Euro coins and banknotes were issued three years later and this was the largest-ever currency changeover when 12 countries introduced Euro as a sole tender (Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal and Spain). The idea of Euro is to serve as a symbol of the European identity and integrate financial markets in Europe by eliminating exchange costs, making cross-border trade much easier and encouraging people to travel and make purchases abroad.

This chapter provides relevant facts for later provable analysis. Gathered theoretical information is related to examined problem and describes the literature suggestions. The idea of Mundell's OCA theory is introduced. Following chapters are concentrated on monetary integration in Europe, conditions needed for admittance to Eurozone, but also distinguishes between positive and negative sides of Euro adoption. One part deals with unilateral Euro adoption. The case of Montenegro is presented here, simply because it is an economy similar to Serbia, so it is good to evaluate experience of this country when considering unilateral adoption.

2.1 Theory of Optimum Currency Area

The theory of Optimum Currency Area (OCA – Optimum Currency Area) was pioneered by a Canadian economist Robert Mundell (1961). This Nobel Prize-winning economist, currently professor at Columbia University and the Chinese University of Hong Kong, is considered as the „father" of the Euro. The theory was elaborated by McKinnon (1963) and Kenen (1969).

OCA theory examines conditions which allow a group of two or more countries to give up their national currencies and establish a monetary union. These conditions describe six criteria upon which can be decided whether certain countries form the optimum currency area. Three of them are economic, the other three are political. The main problem, however, is the impact of assymetric shocks on the currency area. These impacts and possible adjustment mechanisms examined by Mundell's paper in 1961 can be described with the help of the following graphs:

Figure 1 Adjustment to asymmetric shocks
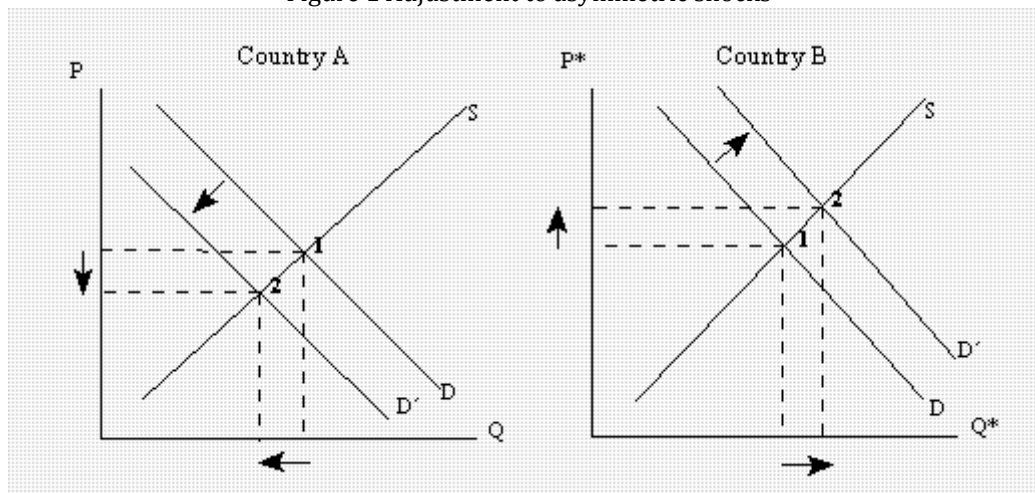
Source: European Parliament – Directorate-General for Research – Working paper – Economic Affairs Series – ECON-104

As Mundell (1961)[1] explains, there are two regions – country A and country B – both producing a good. A shift in demand caused by a change in preferences from the good produced by A to the goods produced by B. This assymetric shock will lower demand in A, reduce prices and raise unemployment. In B, we can see the opposite – increased demand and prices and decreased unemployment. Mundell suggests that a common monetary policy is not able to solve the economic problems of the countries simultaneously. A restrictive monetary policy (supply

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[1] MUNDELL, R. *A theory of optimum currency areas.* The American Economic Review. 1961. v. 51, no. September, pp. 657--665. ISSN 0002-8282.

curve up) might reduce inflation in B, but worsen the unemployment problem in A. On the other side, an expansionary monetary policy (supply curve down) would reduce unemployment in A, but worsen inflation in B. If the two regions have separate currencies, the restorement of equilibrium can be achieved by modifying the exchange rates – by devaluating the currency of A against the currency of B. This will make country A more competitive through lower real wages and prices, demand would rise and unemployment fall. If the two countries have a common currency and this means a fixed exchange rate as well, the disequilibrium will require other ways – a fall in nominal wages and prices, an increased supply of the good, an expansionary fiscal policy.

From this analysis, Mundell suggests that in the case of symmetric shocks, fixed exchange rates or a monetary union is appropriate; if the impacts are assymetric, high labour mobility or wage flexibility are the main prerequisities.

Kenen (1969)[2] suggests that the different parts of monetary union should produce a similar mix of goods, because the more a group of countries are pointed towards the production of particular goods, more likely is that external shocks would have assymetric effects.

McKinnon (1963)[3] states that the more opened is the economy, the more reduced is the effectiveness of an autonomous monetary policy and limited the benefits of exchange rate changes as a means of restoring competitivity.

Frankel and Rose (1998)[4] discuss the linkages between trade and business cycles. They argue that the countries that are close trade partners have more correlated business cycles.

Yüceol (2006)[5] emphasizes four important observable features of the process of European integration from the 1960s up to 2006:

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[2] KENEN, P. The Theory of Optimum Currency Areas: An Eclectic View in Mundell and Swoboda (eds.) *Monetary Problems in the International Economy.* 1969. University of Chicago Press, Chicago. pp. 41-60

[3] MCKINNON, R. I. *Optimum Currency Areas.* 1963. American Economic Review, Vol 53. pp. 717-724.

[4] FRANKEL, J. A. -- ROSE, A. K. *The Endogeneity of Optimum Currency Area Criteria.* 1998. Economic Journal vol. 108 No. 449. pp. 1009-1025.

1) In the 1960s, there was a process of development of the common market, thus, integration promotes convergence among the member states.

2) Throughout the 1970s, overall economic situation was worsening and integration was losing ground in reducing disparities between the levels of development of the various regions and the backwardness of the least-favored countries, which mean that the degree of convergence was decreasing.

3) Europe is not an optimal currency area. Although, On January 1, 1999, 11 EU countries initiated an EMU by adopting common currency, the Euro, the EU does not appear to satisfy all of the criteria for an optimum currency area. Then, joining the EU is not identical with joining the Euro for both old members and new members.

4) Economic union is so far in front of political union.

Popović (2013)[6] states that the greatest argument against Euro is that countries that established monetary union in 1999 did not meet the criteria suggested by optimal currency theory. The mobility of labour was, and still is very low, because language differences make employment in other countries more difficult. Flexibility of wages and prices is insufficient and there are large differences in labor market institutions that affect trends of wages and prices, even if the shocks are symmetric. The role of labor unions is strong and protection of work is very high which decreases the demand for new labor force. Fiscal policy is not centralised, rather conducted by states. The practice has chosen different criteria in relation to those indicated by theory. Five Maastricht criteria differ from those

[5] YÜCEOL, H. *Why European Union is not an Optimal Currency Area: the Limits of Integration*. 2006. Ege Academic Review, vol. 6, Issue 2, p.66

[6] POPOVIĆ, S. *Monetarna politika Evropske centralne banke i njene posledice na proces konvergencije*. PhD. Thesis. Belgrade: Belgrade University, 2013, pp. 325-328

defined by Mundell in his analysis. Considering that these criteria do not coincide with the OCA theory conditions and are not fully met before the beginning of monetary union, there exists reasonable doubt whether single currency is long-term good solution for the member states of European Monetary Union.

So, at the moment of establishment EMU did not represent optimal currency area for the implementation of single monetary policy. It was believed that environment of monetary union will contribute to greater integration of member states, primarily through growth of internal trade and greater financial integration. Contrary to expectations, it did not result in convergence of economic performance of EMU members. Instead of that, the process of divergence of economic results of two groups of countries was developing. Debt crisis intensified these weaknesses and pointed out that serious changes within monetary union are necessary to secure long-term sustainability.

2.2 Conditions for accession to the Euro area

Once a country joins the European Union it is possible to adopt Euro, but membership is not the only precondition. Before entering the third stage of the Economic and Monetary Union (EMU) and adopting the Euro as a currency, member states are required to meet specified criteria. These criteria are defined as nominal and real convergence.

The progress of countries that intend to become Euro area members is examined by the Commission and European Central Bank and published in the so called Convergence Report. Once a country fully satisfies the criteria, the Commission submits a proposal to the ECOFIN Council. After having consulted the European Parliament and discussion among the Heads of State or Government it is decided whether the country may adopt the Euro. If the decision is favorable, the necessary legal steps are taken. ECOFIN also needs to consult the ECB and adopt the

conversion rate at which the national currency will be replaced by the Euro and becomes irrevocably fixed.[7]

2.2.1 Nominal convergence

The convergence criteria are agreed in Maastricht in 1991 as part of the preparations for the introduction of the Euro. The aim of the economic entry conditions is to ensure that a Member State's economy is sufficiently prepared for adoption of the single currency and can integrate smoothly into the monetary regime of the Euro area without risk of disruption. Nominal convergence, known as Maastricht criteria, refers to macroeconomic indices required to ensure macroeconomic and financial stability of the Eurozone and sustainable and balanced economic development within the Euro area as well.[8]

These criteria cover five requirements that are concerned with monetary policy and financial position of government and are defined as followed:[9]

First criterion refers to price stability, i.e. controlled inflation which means that average inflation rate must not exceed by more than 1.5 percentage points the average inflation of the three best-performing EU countries.

Second criterion is long-term interest rate which must not exceed by more than 2 percentage points the average of the three best-performing countries. The aim is to access the durability of the convergence achieved by fulfilling the other criteria.

Third criterion is concerned with budget deficit. More specifically, the rate of planned and realized budget deficit must not exceed 3% of the gross domestic product.

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[7] European Commission. *Covergence Reports*. [ONLINE] Available at https://ec.Europa.eu/info/business-economy-Euro/Euro-area/enlargement-Euro-area/convergence-reports_en. [Accessed 9 January 2017].

[8] European Commission. *Who can join and when*. [ONLINE] Available at: https://ec.Europa.eu/info/business-economy-Euro/Euro-area/enlargement-Euro-area/who-can-join-and-when_en. [Accessed 9 January 2017].

[9] European Commission. *Convergence criteria for joining*. [ONLINE] Available at: https://ec.Europa.eu/info/business-economy-Euro/Euro-area/enlargement-Euro-area/convergence-criteria-joining_en . [Accessed 9 January 2017].

On the other side, soundness and sustainability of public finance is ensured through limits on government borrowing and national debt to avoid excessive deficit. This criterion suggests that public debt must not exceed 60% of the gross domestic product.

And finally, fifth criterion refers to exchange-rate stability and participation in the Exchange Rate Mechanism for at least two years without strong deviations from the ERM II central rate. It is important to mention that during this 2 year period country is not allowed to devalue its own currency against the currency of another Member State with the aim to enhance the competitiveness of its economy.

Indicator	Criterion
Inflation rate	No more than 1.5 percentage points above the average rate of three EU member states with lowest inflation over the previous year
Long-term interest rate	No more than 2 percentage points above the average rate of three EU member states with lowest inflation over the previous year
National budget deficit	At or below 3% of gross domestic product (GDP)
National public debt	No more than 60% of gross domestic product (GDP)
Exchange rate	National currency required to enter exchange rate mechanism ERM II two years prior to entry

Table 1 Summary of Maastricht criteria

2.2.2 Real convergence

Real convergence usually serves to determine the right timing of the Euro area accession, after all Maastricht criteria are fulfilled. Bošković and others (2013)[10] define real convergence as a process which is primarily measured by the increase in GDP per capita and its convergence to the Eurozone countries. GDP per capita is

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[10] BOŠKOVIĆ, O. -- POPOVIĆ, S. -- NJEGOVAN, N. *Proces konvergencije u EMU 12*, Ekonomske teme, ISSN 0353-8648, Vol.51(2), Niš, 2013, pp. 235-250,

especially useful when comparing one country to another, because it shows the relative performance of the countries. A rise in GDP per capita signals growth in the economy and tends to reflect an increase in productivity. The higher GDP per capita means higher standard of living. GDP in PPS is widely used because it eliminates the differences in price levels between countries, thus it allows meaningful comparisons between countries.

It is also needed to adjust the economic structure to the one that exists in the Eurozone and increase trade flows, in order to achieve convergence of economic cycles so that common monetary policy fits all member states.[11]

2.3 Benefits, costs, and risks of Euro area membership

2.3.1 Benefits

In theory, a currency union can offer many economic benefits, but this can happen only under certain circumstances.

One of the most obvious direct benefits according to De Grauwe (2005)[12] is the elimination of transaction costs and exchange rate risks. There are no costs involved in changing currencies and this benefits mainly tourists and firms who trade within the Euro area. Stable exchange rate encourages foreign direct investment, because the investment risk is reduced and so is reduced uncertainty of both importers and exporters, which positively stimulates foreign trade.

Among the other benefits of Euro implemented by De Grauwe are stable prices and low inflation. The European Central Bank is the central bank for Euro and its task is to implement the monetary policy and maintain the price stability within the Eurozone. Because the ECB is independent on government on policy making, it acts to keep inflation low and so interest rates are lower as well. This means easier,

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[11] POPOVIĆ, S. *Monetarna politika Evropske centralne banke i njene posledice na proces konvergencije.* PhD. Thesis. Belgrade: Belgrade University, 2013, p. 283

[12] GRAUWE, P.D. *Economics of monetary union.* 6th edition. Oxford: Oxford University Press, 2005. p.282 ISBN 0-19-9277700-1

safer and cheaper borrowing. When interest rates are lower, consumers are encouraged to obtain credit products cheaper than they normally would. It also helps them save money, because they do not pay much in finance charges. Low interest rates also mean better rate of capital investment return if these investments are financed by borrowing.

By joining the Eurozone a country can obtain many benefits that will lead to the economic growth in the long-term. Reduction of transaction costs, elimination of exchange rate risk and decline in interest rates can cause easier trade with other European countries, increased investment because foreign firms keen to invest in Eurozone, greater macroeconomic stability, development of financial markets and increasing competition in the goods and services market. It should be noted, that estimation of all these impacts is very difficult and depends upon the country.

2.3.2 Costs

Nevertheless, there are also bad sides related to participation in Euro area which should not be forgotten. The main disadvantage identified is the loss of monetary policy.[13]

We can mention here five Eurozone member states that suffered more than the others during financial crisis 2007-2008. The financial crisis revealed some disadvantages of common currency. Not being able to lead an independent monetary policy, devalue the currency and implement expansionary fiscal policy can be very challenging for countries experiencing the asymmetric shocks. Since the monetary policy is set by the European Central Bank, this can be inappropriate for some economies, especially during the times of recession. These examples question the ability of the "one-size-fits-all" monetary policy to sustain economic stability within the Eurozone, because there is obviously evidenced the presence of economic divergence among member states.

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[13] GRAUWE, P.D. *Economics of monetary union.* 11th edition. Oxford: Oxford University Press, 2016. p. 3 ISBN 978-0-19-873987-6

Spain and Ireland experienced asset price booms, while Portugal and Greece experienced consumption booms, because credit inflows to these countries were fuelled by negative interest rates.[14] The countries facing the greatest decline in competitiveness were Spain, Greece and Portugal.[15] On the other side, the UK engaged in quantitative easing program[16] in 2009 as financial crisis intensified. The Central Bank of England cut interest rates sharply and announced that it would begin a programme of large scale purchases of public and private assets, all with the aim to increase nominal spending and achieve inflation target of 2%.[17] Many economists believe that country would not restore the economy if they used Euro.

The financial markets may be integrated, but it should be held on mind that each country deals with its specific challenges for sure. Germany and Denmark share large tradition of funding via covered bonds, so they prefer fixed rate mortgages, while Greece and Italy act to keep their mortgages on variable interest rate rather than fixed.[18] This makes them sensitive to interest rate changes. However, they are part of the Eurozone and because of this reason it is impossible to implement the policy which will suit their economy in the best way possible. So, for an example, when inflation rises, a typical response by a financial authority is to increase interest rates. After economic crisis, the European Central Bank increased interest

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[14] MCDONNELL, T. *The Euro Crisis: Causes and Solutions.* TASC Discussion Paper, July 2012. p.6

[15] CLARKE, S. – DALEY, C. *The Eurozone Crisis*. CIVITAS Institute for the Study of Civil Society, 2010. p.14

[16] Quantitative easing (QE) is an unconventional form of monetary policy where a Central Bank creates new money electronically to buy financial assets, like government bonds. This process aims to directly increase private sector spending in the economy and return inflation to target.

[17] The United Kingdom's quantitative easing policy: design, operation and impact, Quarterly Bulletin, 2011 Q3. Accessible online:
http://www.bankofengland.co.uk/publications/Documents/quarterlybulletin/qb110301.pdf

[18] Some international trends in the regulation of mortgage markets: Implications for Spain. 13/17 Working Paper, Madrid, April 2013. p.7 Accessible online:
https://www.bbvaresearch.com/KETD/fbin/mult/WP_1317_tcm348-384510.pdf

rates from 1.25% to 1.5% in order to prevent the high inflation in Eurozone.[19] While the high interest rates were a good option for Germany for an example, this move was not good for Greece at all.

Non-Euro countries again have an advantage, because their independent central banks can act as the lender of last resort for the country's debt. This affected Italy when rising bond yields caused major issues. Italy was not able to increase liquidity in the markets, because Central bank does not buy member-nation specific bonds.

Although the Italy's economic issues are much deeper, it is worth to mention that the country's economy has barely grown since the Euro introduction in 1999.[20]

2.3.3 Risks

It is undeniable that a strong currency has great psychological influence, but also bears certain risks with it. Speaking about Serbia, changing the national currency represents compelling option. But as in economics nothing is black nor white, it should be firstly analysed what would be gained and lost in the case that Euro replaced Dinar.

The experts from National Bank advise that in the case of Serbia this would mean significant increase in overall price level. The country would not be able to compete with others, simply because it would not be able to implement monetary policy by itself and depreciate the currency. The decrease in competitiveness would cause trade deficit and the National Bank would not be able to ensure the liquidity and stability of the financial system, because it would be based on a foreign currency. The citizens would be especially hit by the Euro introduction.

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[19] The Wall Street Journal. *ECB Increases Interest Rates*. July 8,2011. [ONLINE] Available at: http://www.visam.ch/uploads/allegati/Files/ECB%20Signals%20More%20Rate%20Increases%20-%20WSJ_com.pdf [Accessed 12 January 2017].

[20] Bruegel. *Why does Italy not grow?* [ONLINE] Available at: http://bruegel.org/2014/10/why-does-italy-not-grow/ asp [Accessed 12 January 2017].

Wages, pensions and incomes would keep decreasing, while the unemployment would keep on increasing.

Danica Popović (2000)[21] in her paper proposes recommendations for the Government and discusses risks associated with early Euro adoption. She warns that what makes Serbia different from most countries that use Euro is the level of income and productivity and if income and productivity would grow faster than in the EU, which is quite likely and feasible, these would bring some problems. One of them is endogenous inflation. To simplify, when productivity starts increasing in Serbia, and the quantity of goods and services as well, increased transaction volume will be hardly settled with the previous amount of money. Increased money demand will also increase interest rates. Then Euro becomes more expensive in Serbia than in EU, and its purchasing power becomes greater than in EU, which means that it came to real appreciation of the currency in Serbia. A rise in interest rates would be equivalent to anti-inflationary policy of autonomus Central Bank. And this is detrimental for growing economies. When interest rates are too high, a number of quality investment projects that ensure economic growth, simply leads from profit to loss. In the case that it is posible to maintain low interest rates level, chances for prosperity are more certain. It is useful to mention here the experience of Great Britain in 1992 when they faced dilema whether to allow the growth of interest rates or leave the European Exchange Rate Mechanism. Britain has decided to devalute the currency resulting in export boom and pulling out of recession.[22] This is the argument which should be considered when deciding about Euro introduction.

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[21] POPOVIĆ, D. *A warning to Serbian policy-makers: Say no to early Euroisation.* Prepared for the CEPS conference: A European Agenda for a Democratic Serbia, CEPS, Brussels, 6-7 November, 2000. Available online: danica.popovic.ekof.bg.ac.rs/Danica-Popovic-CV(15).docx

[22] Craig BERRY, C. -- LAVERY, S. *Sterling depreciation & the UK trade balance*. SPERI British Political Economy Brief No.2, Sheffield Political Economy Research Institute Interdisciplinary, Centre of the Social Sciences, 219 Portobello Sheffield S1 4DP. pp. 1-3

2.4 Unilateral adoption of Euro

For most European Union member states the adoption of single currency is the last stage of the integration process. 19 out of 28 countries are in the Eurozone, while 7 of them are obliged to join on meeting convergence criteria – Bulgaria, Croatia, Czech Republic, Hungary, Poland, Romania and Sweden. Denmark and United Kingdom are known as " opt-outs" , which means that if they do not wish to join others in a particular field of EU policy, they can opt out. Four countries are using the Euro with a monetary agreement – Andorra, Monaco, San Marino and Vatican. Besides them, Montenegro and Kosovo[23] are using the Euro unilaterally.

The most far reaching proposal is to let the countries in Central and Eastern Europe adopt the Euro unilaterally. While this regime was originally formulated for EU accession countries, it has attracted attention as a possible long-term solution for non-accession countries in South-Eastern Europe (Albania, Bosnia and Herzegovina, Macedonia and Serbia). Proponents of this view also claim the unilateral Euroisation might reduce political influence over credit allocation in the domestic banking system, which has traditionally been one of the main sources of financial vulnerability. Unilateral Euroisation would entail nearly the same benefits as membership in the Euro area, the main exception being representation on ECB governing bodies. But it is not without disadvantages. Nuti (2002)[24] defines the following costs. First, the central bank would have to use its foreign reserves to retire the domestic currency from circulation. Second, it would lose the seigniorage revenue obtained by issuing domestic currency. Third, the central bank's role as a lender of last resort to domestic financial institutions would be limited by the size of foreign exchange reserves remaining after the retirement of domestic currency. The biggest danger, however, might be that the "wrong" conversion parity is

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[23] Kosovo is the subject of territorial dispute between the Republic of Serbia and the self-proclaimed Republic of Kosovo. The Republic of Kosovo unilaterally declared independence on 17 February 2008, but Serbia continues to claim it as a part of its own sovereign territory.

[24] NUTI, D.M. *Costs and benefits of unilateral Euroisation in central eastern Europe.* Economics of Transition. 2002. 10 (3), pp. 419-444

chosen. In other words, the risk of a future regime change cannot be entirely eliminated – or the Euro's credibility automatically acquired – by adopting the Euro unilaterally.

2.5 Montenegro as a unilateral Euro adopter

Montenegro is using the Euro since year 2002 and they have not signed any formal agreement with the European Union which allows them to use it as a sole legal tender. The reason for unilateral adoption was domestic instability and poor monetary management, but also a political motive. Before Euro, the country was using German mark rather than Yugoslav Dinar.

The use of Euro should help Montenegro to stabilise the economy, especially when it comes to reducing the exchange rate costs and bringing down inflation. It should also reduce business risk premium by assuring investors that there will not be any devaluation of currency, while elimination of transaction costs should make trade easier. But there were also some costs and challenges. Firstly, loss of independent monetary policy brought Montenegro in such a situation that it can not use intruments of stabilizing policy when hit by assymetric shocks. Simply because it is not part of the Eurozone, the European Central Bank is not obliged to intervene and consider the needs of Montenegro. In the period of crisis, Eurozone member states take all precedence. The problem is also the fact that European Commission and European Central Bank showed their dissidence over Montenegro's unilateral use of Euro several times. The rules are clear – fulfilling the Maastricht criteria with spending at least two years at Ecxhange Rate Mechanism II and „first and foremost, to be a member of the EU", and Montenegro still does not meet any of these conditions.

"Any unilateral adoption of the single currency by means of "Euroisation" outside the Treaty framework would run counter to the economic reasoning underlying Economic and Monetary Union, which foresees the eventual adoption of the Euro as the end-point of a structured convergence process within a multilateral framework.

Unilateral "Euroisation" cannot therefore be a way of circumventing the stages foreseen by the Treaty for the adoption of the Euro." (ECOFIN Council report, 8 November 2000)

On 17 December 2010 Montenegro was granted a candidate status to join the European Union. In their Stabilisation and Association Agreement is stated that "unilateral introduction of the Euro was not compatible with the Treaty". Later on it was said that the issue of unilateral Euro adoption will be solved as the last in the process of negotiations.

"Montenegro's present use of the Euro [...] is fully distinct from Euro area membership. The Council recalls that unilateral "Euroisation" is not compatible with the Treaty [...]. An EU Member State cannot adopt the Euro and join the Euro area without fulfilling all the criteria defined in the Treaty. [...] Taking into account the above, the implications of the Treaty framework for Montenegro's monetary regime will be detailed in due course, at the latest by the time of possible future negotiations for accession to the EU." (Council decision, 13831/1/07 REV 1, 15 October 2007)

Nikola Fabris (2007)[25] discusses the results of the unilateral adoption of the Euro in Montenegro. Inflation decreased from 67% in 1999 to 24% in 2000. From 2002 inflation in Montenegro is keeping one-digit trend. It took six years to reach the level of inflation in the Eurozone. Euroisation helped the development of the banking system which practically did not exist at the end of 90s. The positive effect was reform of the banking system, which has resulted in the growth of banking activities. Euro adoption also improved fiscal discipline, because it prevented the financing of the budget deficit from the primary emission of money. In addition, subsidizing of state enterprises and insolvent banks was disabled. In the year of Euro introduction, the budget deficit was 20% of GDP and in later years Euroisation led to some kind of self-discipline. Other positive impact was increasement of foreign direct investments, which amounted 529 million € in 2007

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[25] FABRIS, N. *Evroizacija u Crnoj Gori – prednosti, nedostaci i ograničenja*. Kvartalni monitor ekonomskih trendova i politika u Srbiji, Centar za visoke ekonomske studije, Beograd. 2007. pp. 89-93 Available online: http://www.fren.org.rs/sites/default/files/qm/km11-00-ceo.pdf

making 25% of GDP. There were also negative impacts of Euro adoption. In year 2007, inflation increased to 7.7%. Due to limited instruments of monetary policy it was not possible to bring inflation down. The Central Bank of Montenegro (CBM) does not pursue a policy of issuing money, does not carry out operations on the open market and there is no reference interest rate. Thus, the most important instruments of monetary policy are mandatory reserves. Besides, CBM does not act as a lender of last resort, i.e. can not react in the case of eventual bank crisis. The high inflow of foreign capital has caused high deficit of current payment balance account which amounted to more than one billion Euro in 2007 and 774.6 million Euro in 2010. On the other hand, the possibility of pursuing the policy of exchange rate mechanism for elimination of this deficit is lost. Although the deficit is the consequence of rapid development, it is less covered by foreign direct investments.

3 Assessment of nominal and real convergence

Nominal and real convergence represent two critical aspects for admittance to the Eurozone. This section analyzes the fulfillment of these criteria from the point of view of Serbia and compares the results with chosen countries.

3.1 Nominal convergence

Nominal convergence refers to the convergence of five nominal macroeconomic indicators outlined by the Maastricht Treaty with the purpose to achieve price stability within the Eurozone and ensure it was not negatively impacted when new member states join. Nominal convergence is observed as the accomplishment of requirements which refer to price stability, long-term interest rates, budget deficit, public debt and exchange-rate stability.

3.1.1 Assessment of the inflation criterion

This criteria refers to controlled inflation, which means that average inflation rate must not exceed by more than 1.5 percentage points the average inflation of the three best-performing EU countries. To assess the convergence criteria on inflation, a specific consumer price index has been developed within the European Union – the harmonized index of consumer prices (HICP). HICP is defined as a weighted average of price indices of Member States who have adopted Euro. The goal of the European Central Bank is to keep the increase HICP below, but close to 2% for the medium term. In order to do that, the ECB can control short-term interest rates.

In Serbia, Macedonia and Montenegro, the HICP is called the CPI (Consumer Price Index) and is used to set the inflation target of the national banks of these countries.

Figure 2 shows the development of HICP and CPI in chosen countries within time period 2005-2015 in relation to the criterion of price stability set by the Maastricht Treaty.

Figure 2 Development of HICP inflation within time period 2005-2015
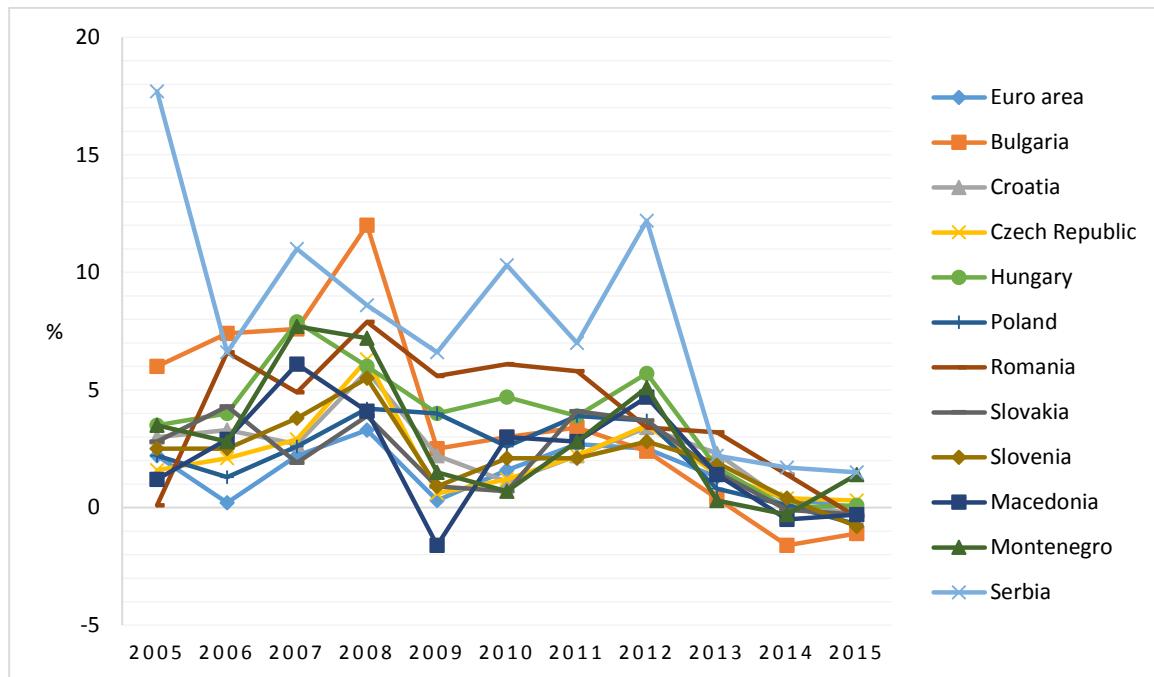
Source: Eurostat, NBS, NBRM, CBM

Slovakia, Slovenia and Czech Republic are the best performers in the Eurozone. When it comes to Euro area candidates, Romania is struggling the most with average inflation rate high above Euro area average. Better results are achieved by Croatia and Macedonia, but variation in Macedonia was the highest among all countries. The poorest performance has Serbia, with the average inflation rate of 7.76%. Serbia always had issues with maintaining price stability throughout history. If we examine a period before 2005, The Yugoslavian hyperinflation of 1992-1994 was historically unique and at its peak, in January 1994, the monthly inflation rate reached 313 million percent, thus becoming the second highest recorded rate

of inflation.[26] It can be concluded that National Bank had done a lot in the process of achieving inflation target in the previous decade.

Figure 3 Target and actual inflation, by month (y-o-y growth, in %)
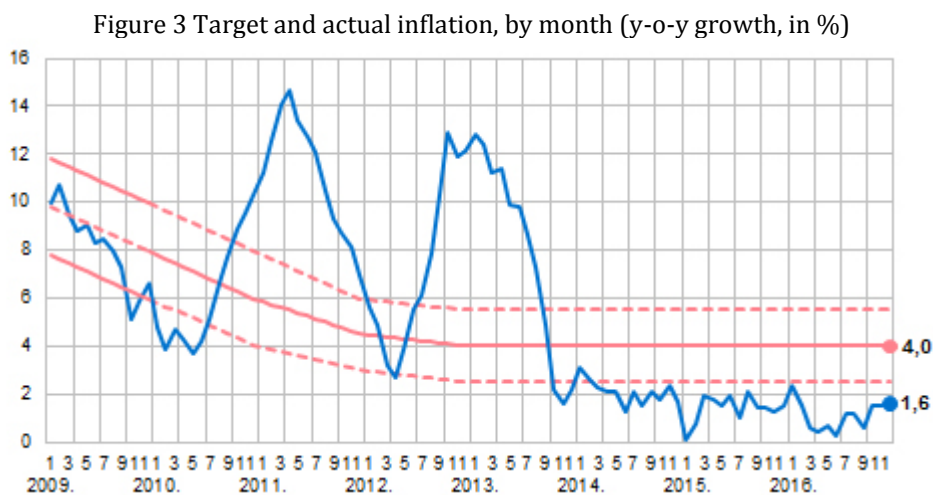
Source: NBS

We can notice that inflation rates in year 2014 and 2015 stand below the target (4.0%)[27]. Inflationary pressures during 2016 remained rather subdued due to the disinflationary effect of the majority of domestic factors, continuing slide in global prices of oil and primary agricultural commodities, and low inflation abroad, particularly in the Euro area which is major foreign trade partner. The monetary policy stance in the period ahead will depend primarily on international developments.[28]

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[26] PETROVIĆ, P. -- BOGETIĆ, Ž. -- VUJOŠEVIĆ, Z. *The Yugoslav Hyperinflation of 1992–1994: Causes, Dynamics, and Money Supply Process.* Journal of Comparative Economics 27, 335–353, 1999. Article ID jcec.1999.1577. Available online at http://www.idealibrary.com

[27] Inflation target is determined jointly by National Bank and Government and is based on analysis of current and expected macroeconomic developments and medium-term plan of price adjustments. The inflation target is determined as a unique value with permitted deviation, measured by the annual percentage change in the consumer price index, for several years ahead. The NBS and Government agreed that inflation target amounts to 2-4% per annum in order to maintain medium-term price stability, but also get closer to the level of price and income that exists in European Union.

[28] Statistical Bulletin (2016), National Bank of Serbia

There is extended period of low inflation, but Serbia has not fully created favorable conditions for the fulfilment of the criterion of price stability.

3.1.2 Assessment of the interest rates criterion

One another criterion for determining whether or not an EU Member State is eligible to join the European Monetary Union is criterion that refers to long-term interest rates i.e. yield on government bonds with a maturity of ten years. According to the Maastricht criterion, the rate must not exceed by more than 2 percentage points the average of the three best-performing countries.

Figure 4 Financial convergence, long-term interest rates
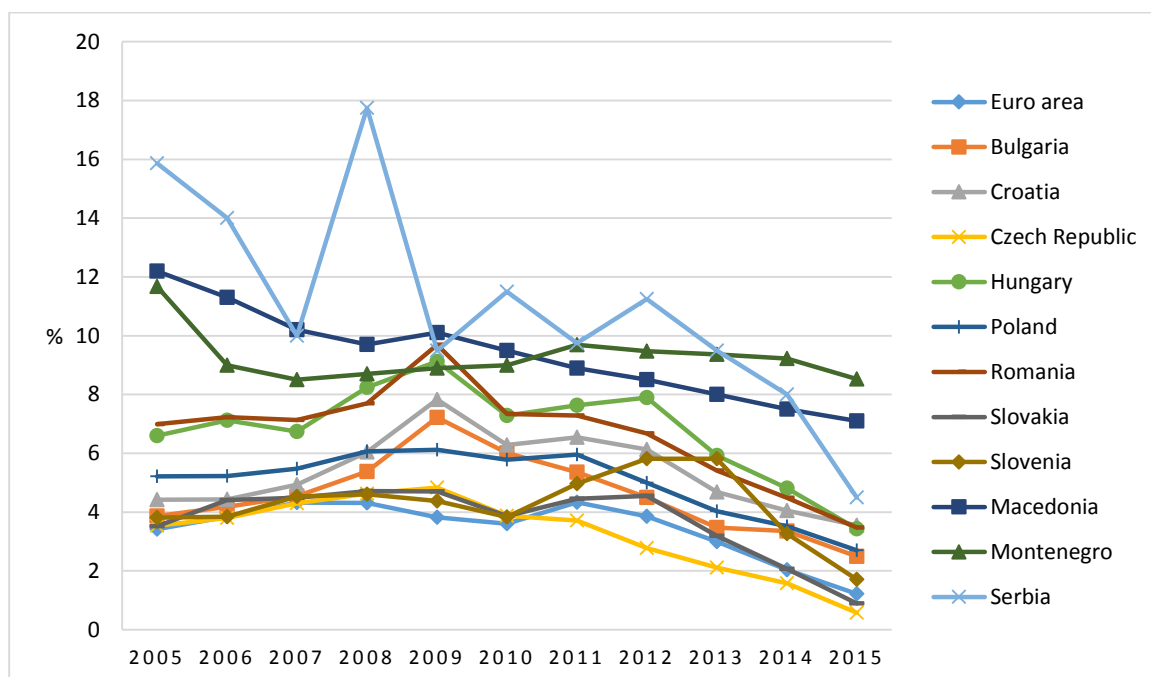
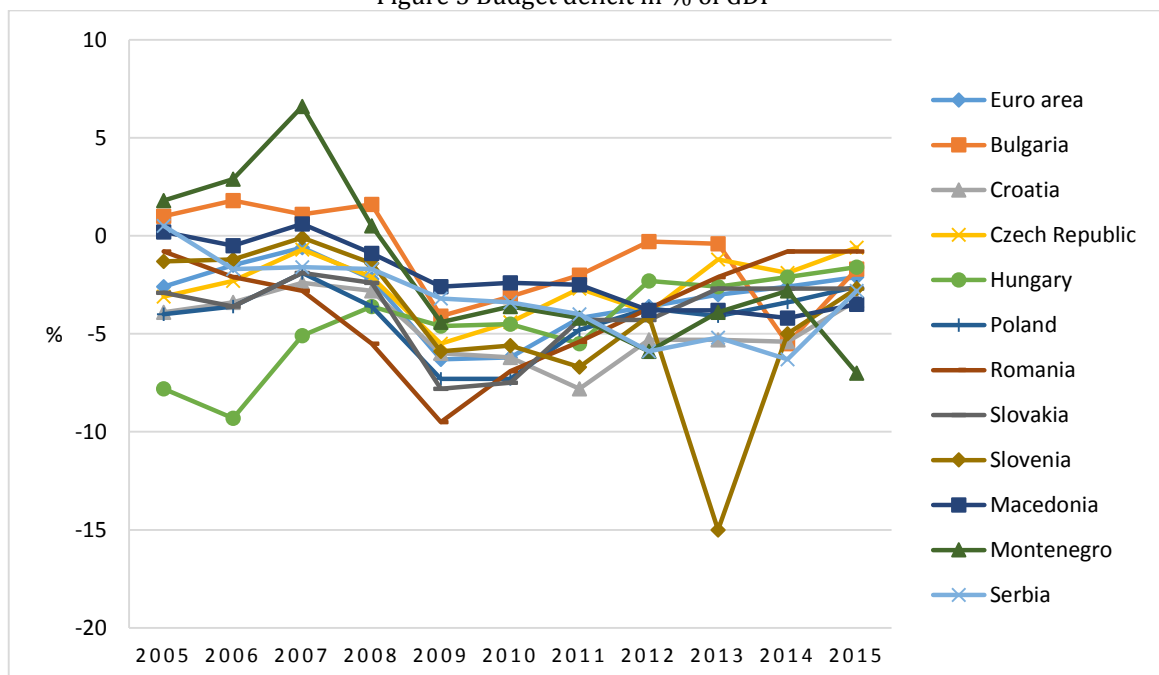
Source: Eurostat, NBS, NBRM, CBM

Slovenia, Czech Republic and Slovakia achieved and maintained a relatively high level of financial convergence measured by this indicator. Hungary, Romania and Bulgaria are far from fulfilling this criteria, while in Poland is a better situation, but the long-term interest rates are higher than allowed. The National Bank of Serbia left its key policy rate steady at a record low of 4.0% in October 2016. As expected,

the inflation is likely to return the target range of 4 percent ±1.5 by mid-2017. Policy makers also advised caution regarding future Fed and ECB monetary policy measures and their potential impact on global capital flows, but notice that Serbian economy is resilient due to the successful implementation of fiscal consolidation and structural reforms, as well as the reduction of external imbalances. (National Bank of Serbia, 2016) Interest rates in Serbia averaged 11.06% from 2005-2015, reaching all time high of almost 18% in 2008. From the countries in region, only Macedonia and Montenegro have higher interest rates.

3.1.3 Assessment of the budget deficit criterion

Maastricht criteria suggest that the rate of planned and realized budget deficit must not exceed 3% of the gross domestic product.

Figure 5 Budget deficit in % of GDP
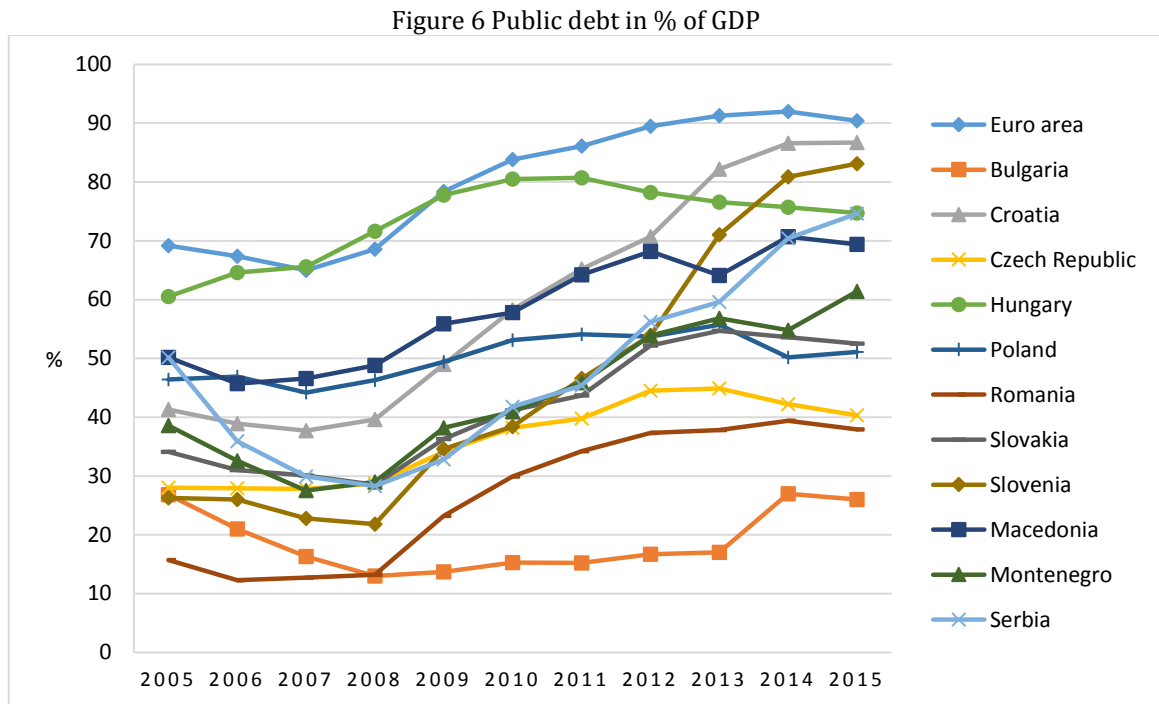

Source: Eurostat, NBS, NBRM, CBM

The biggest issue with the budget deficit had been particularly in Poland, Hungary and Romania. Slovenia was especially hit by the 2013 crisis and the budget deficit for this year has reached 15%. Croatia, Macedonia and Montenegro have satisfactory public finances.

At 2015 year level, the budget deficit amounted to 2.8% putting this public finance of Serbia in line with requirements of the Maastricht deficit criterion. This represents a very significant economic policy result, as it contributes to the sustainability of Serbia's public finances and enhances its resilience to external shocks. Most of the savings made in 2015 is attributable to cuts in pensions and public sector wages, but also to improved tax collection. Considering that a further reduction in the share of consolidated budget deficit in GDP should rely more on savings resulting from structural adjustments, which initially entail certain costs, the National Bank of Serbia estimates that this share will continue down in the years ahead, mostly as a result of the recovery of external demand, that is, of the Euro area, but also because of a lower share of consumption in GDP under the impact of fiscal consolidation measures, despite the anticipated increase in imports of capital goods.

3.1.4 Assessment of the public debt criterion

Maastricht criterion limited public debt in relation to GDP to 60%.
There was noted a growing trend in all countries after 2008 crisis. In all countries there are satisfactory conditions or decreasing trend, except in Croatia and Slovenia where from 2013 this trend is continuously growing.

Figure 6 Public debt in % of GDP

Source: Eurostat, NBS, NBRM, CBM

The public debt represents one of the biggest issues for Serbian economy. From year 2008 Serbia's public debt started increasing as the country was fighting effects of world-wide 2008 financial crisis. With public debt amounting to 74.6% of GDP, the indebtedness of the Serbian government sector still remains above the EU average. In accordance with the Fiscal Strategy for 2016 with Projections for 2017 and 2018, further consistent implementation of fiscal consolidation is assumed in order to ensure sustainable public finance and put public debt on a downward path from 2017 onwards.

### 3.1.5 Assessment of the exchange rates criterion

Serbia is not participating in the exchange rate arrangement ERM II. From the perspective of fulfilling the exchange rate criterion therefore it cannot be formally assessed.

3.2 Real convergence

There is no clearly defined set of indicators that measure real economic convergence as it is case with Maastricht criteria which are considered as official ones. However, the degree of real convergence is an important indicator of country's similarity with Euro area. It can be monitored through examining the level of income, structure of the economy and increase of trade flows with Euro area in order to ensure high convergence of business cycles. One of the most common ways used to express level of similarity is GDP per capita in PPS.

Figure 7 shows the percentage of average GDP per capita in PPS in chosen countries in relation to the Euro area average (19 countries), calculated for the time period 2005-2015. For the comparison with Serbia, 6 countries obliged to join on meeting convergence criteria are chosen (Czech Republic, Croatia. Poland, Hungary, Romania and Bulgaria) and Slovakia which adopted Euro in 2009. Other countries represent former Yugoslav countries, all having the status of EU candidate, excluding Slovenia which is part of the European Union since 2004 and Eurozone member since 2007.

Figure 7 % of GDP per capita in PPS in relation to the Euro area average
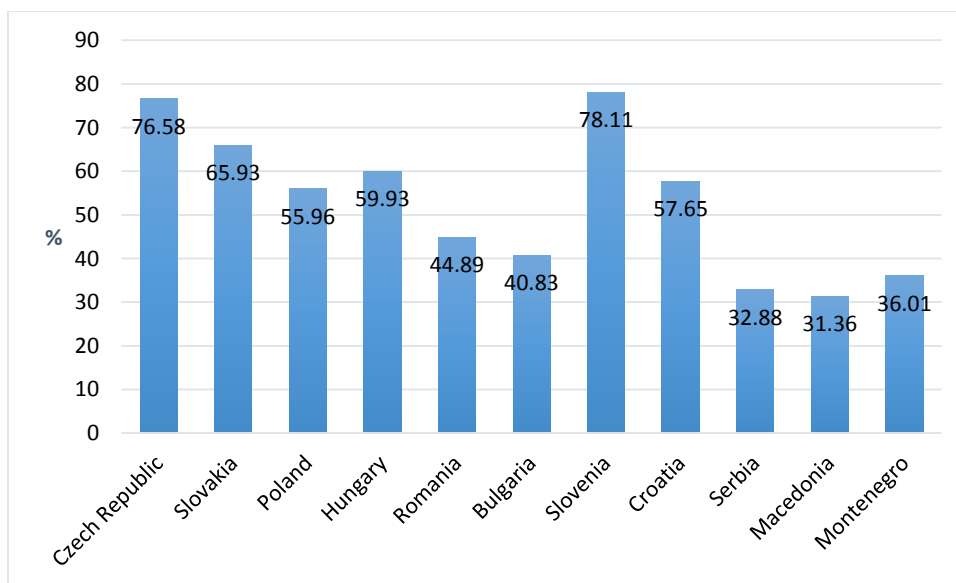
Source: Own calculations based on Eurostat data

As we can see, all countries aspiring to membership in the Eurozone are converging to the Eurozone in a long-run period. Slovenia has achieved the best result. Its average GDP per capita calculated for this period represents 78.11% of Euro area average. At the second place is Czech Republic with 76.58% which performs better than Slovakia, even though it is not Euro area member. It is interesting that the newest member state Croatia has better result than Poland, Romania and Bulgaria which joined the European Union in 2004. It is obvious that exists a large gap between these countries and Serbia, as well as other EU candidates that are still going through the transition period. The worst results are achieved by Macedonia (31.5%), Serbia (33%) and Montenegro (36.2%).

Figure 8 Employment to population ratio, 15+, total (%)
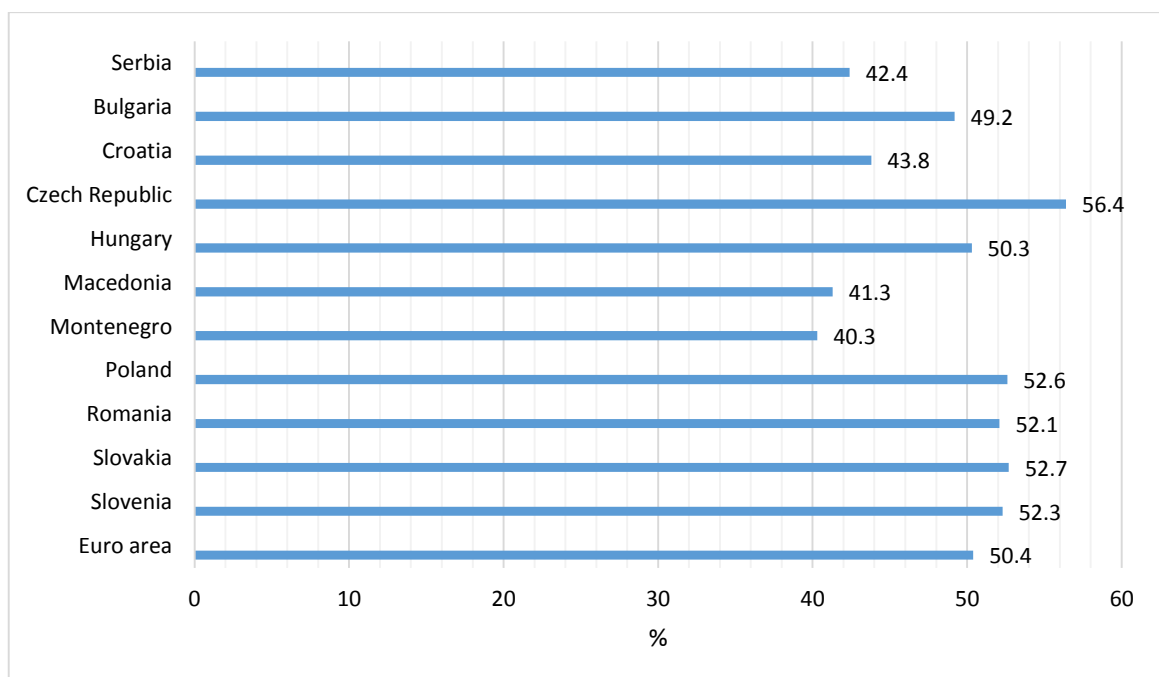
Source: The World Bank

The gap that exists in the level of GDP per capita can be explained by the fact that there is difference in the rate of employment. In Serbia, according to data from year 2015, only 42.4% of the population aged 15-64 has a job. With so little

employment, a country cannot sustainably grow and make progress in real convergence. Here lies a potential for growth in supporting small and medium enterprises and self-employment.

Figure 9 Median gross hourly earnings, all employees (year 2014)
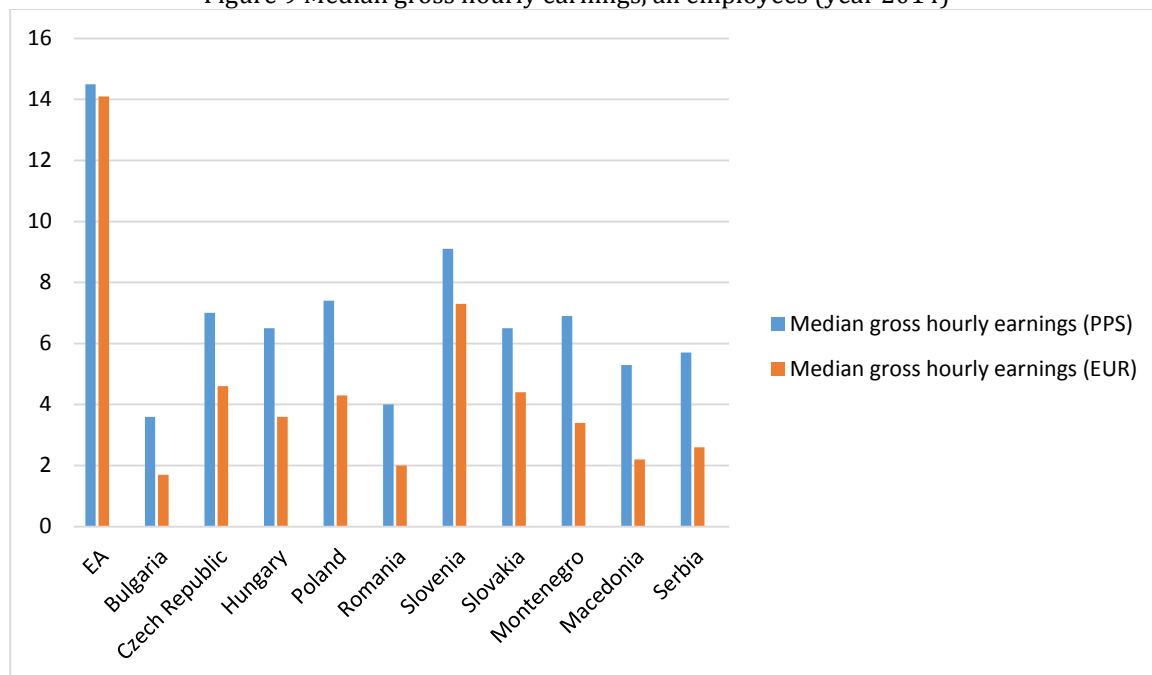
Source: Eurostat

The wages are major source of income and if we take a look at Figure 9, we can clearly see that the highest median gross hourly earnings in Euro are recorded in Slovenia, ahead of Poland, Czech Republic, Montenegro and Hungary and Slovakia with the same value. By contrast, the lowest ones are registered in Bulgaria and Romania, followed by Macedonia and Serbia. When expressed in Euro, median gross hourly earnings in Serbia are 2.5 times lower when compared to Euro area. When adjusted for price levels, measured in PPS, they are about five times lower.

Apart from reaching the average level of income, it is necessary to adjust the structure of economy so that it is compatible with the one that exists in Eurozone, in order to achieve the strong economic integration of EMU countries.

Figure 10 GDP sector composition (year 2010)
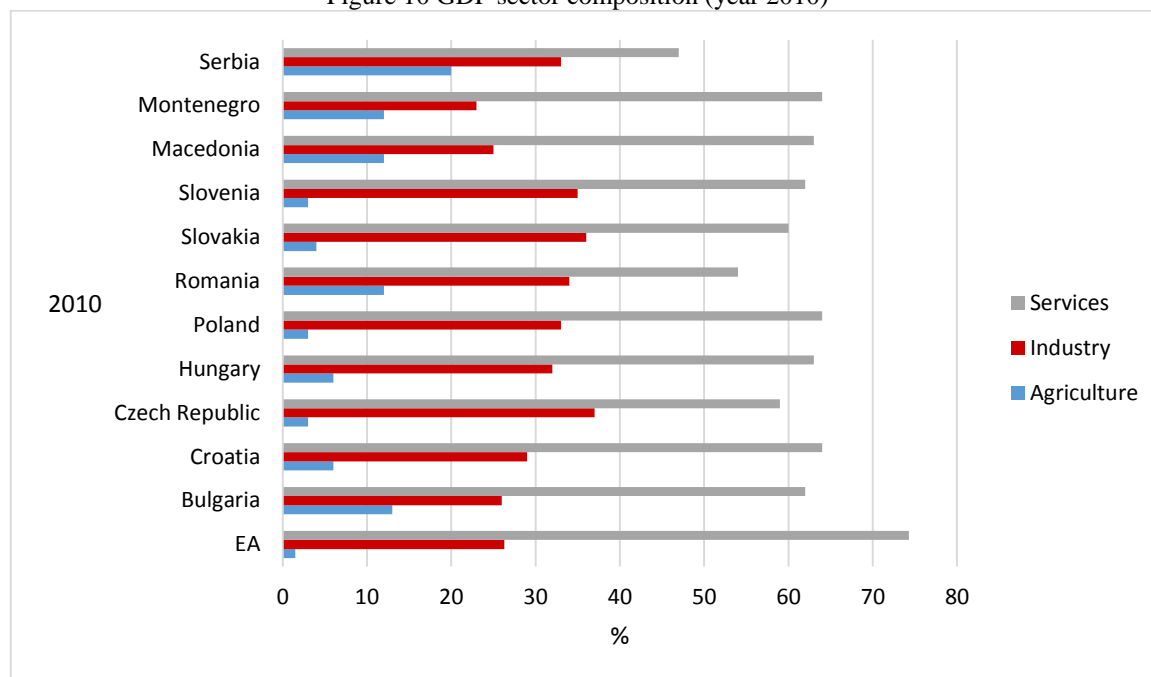
Source: The World Bank

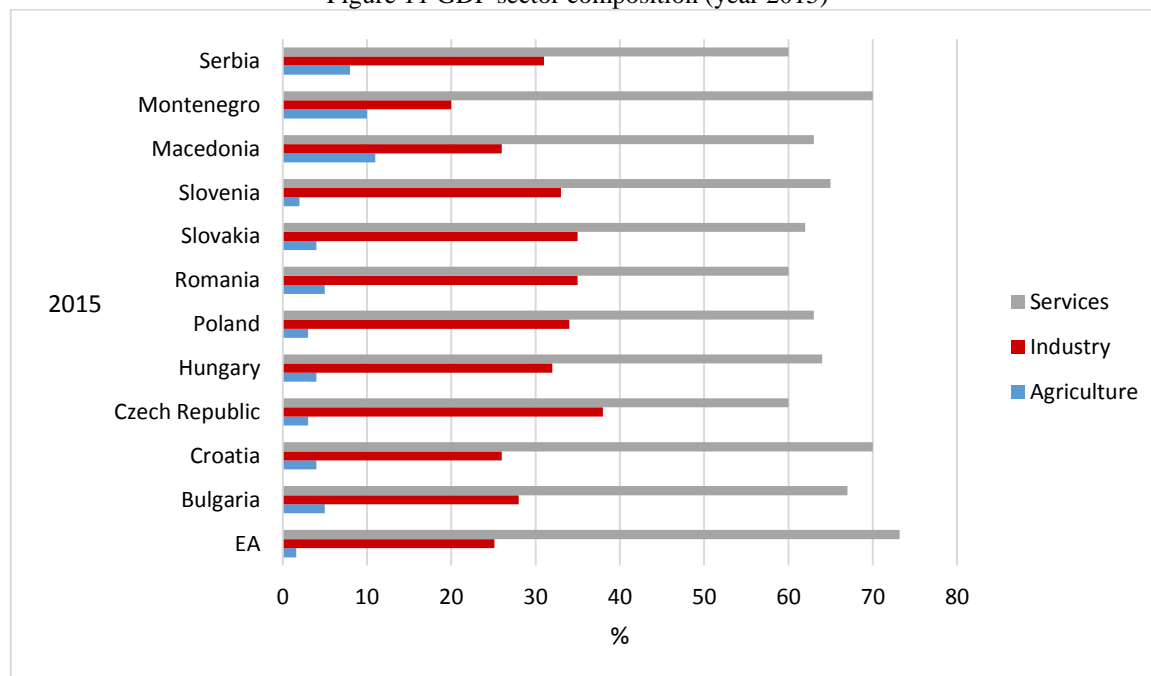Figure 11 GDP sector composition (year 2015)

Source: The World Bank

The dominant share of output in EMU is taken by sector of services, whose contribution to GDP makes 74.3% in year 2010, participation of industry is 26.3%, while the share of agriculture is 1.5%. Over the last five years, observed countries included Serbia, reduced the share of agriculture, which means that they achieved progress in approaching the structure of the economy to the one that exists in Euro area.

The coherence between business cycles can be observed on the basis of development in the annual GDP growth rate, as well as the correlation analysis[29] of real GDP growth rate of those countries and EMU.

Bulgaria	Czech Republic	Germany	Croatia	Hungary	Poland
0.79	0.92	0.92	0.86	0.81	0.65
Romania	**Slovenia**	**Slovakia**	**Montenegro**	**Macedonia**	**Serbia**
0.74	0.92	0.90	0.83	0.79	0.63

Table 2 Correlation coefficients of real GDP growth rate between selected countries and Euro area
Source: Own calculations based on Eurostat data

The resulting coefficients from Table 2 indicate the intensity of similarity between GDP growth rate of the chosen countries with the Eurozone within a period from 2005-2015. Germany is included in analysis as the best performer in the Eurozone. Czech Republic, Slovakia and Slovenia reach the highest correlation coefficients among all countries. Croatia, Montenegro and Hungary also reveal good

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[29] The correlation analysis deals with relationships among variables and it is the most widely used technique for measuring the similarity of business cycles. The correlation coefficient is a measure of linear association between two variables. Values of correlation coefficient are always between -1 and +1, where a correlation coefficient of +1 indicates that two variables are perfectly related in a positive sense and coefficient of -1 indicates that two variables are perfectly related in negative sense. If the coefficients is equal to 0, this means that there is no linear relationship between variables.

correlation. Macedonia, Bulgaria and Romania show a little bit lower similarity, but still good. Poland and Serbia seem to be the least correlated, but still do not represent bad results.

The achieved outcome can be explained by the fact that the main trade partners of chosen countries are the European Union member states, except Montenegro. Trade flows increase the similarity between business cycles, because the movement of aggregate activity (GDP) in the countries is associated with the demand of main foreign trade partners.

Figure 12 Share of trade with EU (Year 2015)
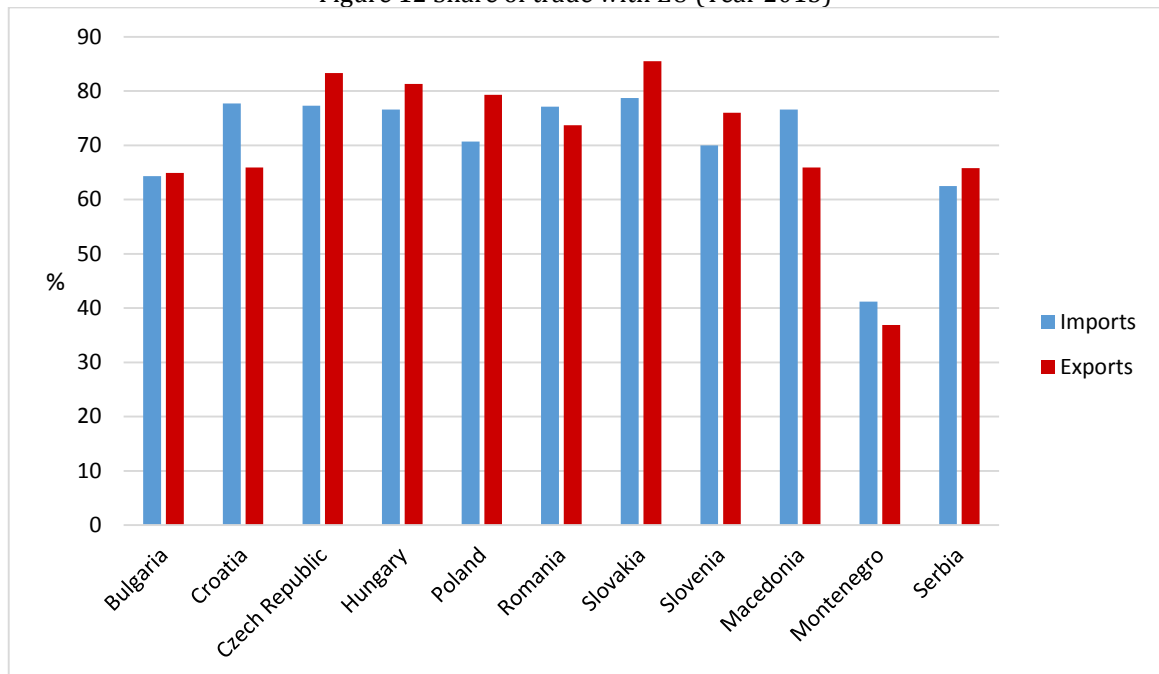
Source: European Commission - Directorate-General for Trade

In general, Serbia has significant benefits of trading with EU countries. European Union has traditionally been a key trade partner of Serbia. Looking at data from year 2015, Euro Union shared 65.8% in Serbia's total exports and 62.5% of the total import of Serbia. These percentage recorded similar values in previous years and it is also worth mentioning that the export of Serbian products to the EU recorded higher growth in recent years, thus resulting in lowering trade deficit.

4 Monetary strategy of National Bank of Serbia

The exchange rate stability measured by the changes in the values of national currencies vis-à-vis Euro depends on the monetary strategy of National Bank and choice of suitable exchange rate regime. The exchange rate fluctuations have noticeable macroeconomic influences and affect foreign trade and economic growth of a country.

The price instability in Serbia, which culminated in the late '90s with the existence of high degree of correlation between exchange rates and inflation, are the main reasons why the exchange rate was the anchor against inflationary pressures and ensuring the macroeconomic stability. From 2001 a managed floating exchange rate regime was pursued, which means that the National Bank had right to intervene in order to limit excessive daily oscillations in the foreign exchange market. In the next period there were no high oscillations of exchange rate which resulted in reduction of inflationary expectations. However, at the beginning of 2003, NBS has often intervened to reduce significant exchange rate fluctuations. Gradual depreciation interrupted the disinflation process and was the main cause of re-inflation growth in 2004. The growing prices and high capital inflows were also the main motives for leaving the policy of managing the exchange rate. The NBS decided to promote a greater degree of fluctuations in accordance with market conditions. High capital inflow has led to the appreciation of exchange rate which in the following period resulted in bringing down inflation from 17.7% in 2005 to a level of 6.6% at the end of 2006.

New monetary policy framework adopted in 2006 defined inflation targeting as monetary strategy. Main principles of achieving the inflation target were changing the interest rate as a main monetary policy instrument. Other monetary policy instruments had supporting roles, as they should contribute to a smooth transition of the key policy rate to the market and balanced development of financial markets without threatening the stability of the financial system. The new monetary policy

included the existence and managed floating exchange rate regime, but with occasional interventions and only in order to reduce the negative effects of temporary shocks and prevent daily fluctuations.[30]

Figure 13 Development of inflation 2006-2008
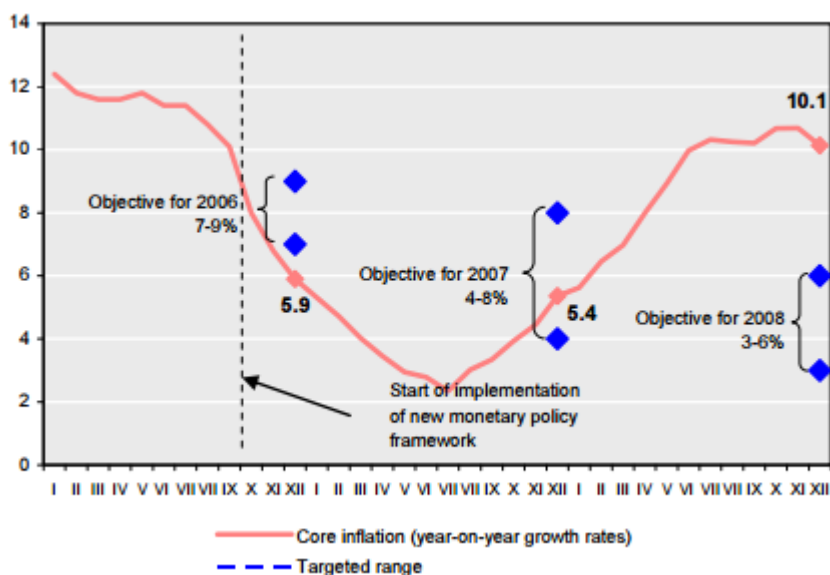
Source: NBS

The goals for years 2006 and 2007 were achieved and the inflation rate was below the target. However, the goal for 2008 was not reached and the base inflation at the end of that year was significantly above the target. Series of external shocks in the previous year led to increase in inflationary expectations. It is important to mention that besides restrictive monetary policy, the national banks of other countries who also conducted the inflation target regimes were not successful. The reason was enormously high growth in prices of oil and other primary commodities in 2007, which led to higher inflation rate in all countries of the European Union in 2008.

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[30] Memorandum on the Principles of the New Monetary Policy Framework Aiming at Low Inflation Objectives, National Bank of Serbia, September, 2006. Accessible online:
https://www.nbs.rs/internet/english/30/Memorandum_new_monetary_policy_framework_200609.pdf

Figure 14 Exchange rate of Dinar
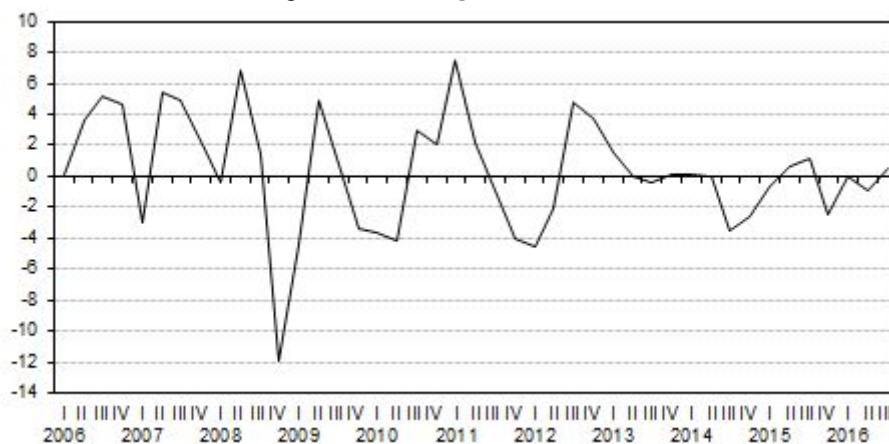
Source: NBS

With the introduction of the new monetary policy framework, the Dinar appreciated and that led to negative consequences on the balance of payments as a result of large foreign capital inflows and foreign investment. The crisis reverse the trend, but depreciation was inevitable due to deficit of current account and inflation higher than the one in Eurozone. At the end of 2008, Dinar significantly depreciated. NBS again extensively intervened in the foreign exchange market to prevent a greater devaluation of Dinar. During 2009 and 2010 the depreciation of national currency has continued. At the start of 2011 Dinar slightly appreciated, followed by depreciation trend that continued in 2012 as well. The final conclusion is that this framework was successful in terms of bringing down inflation in short-term, but not able to stabilize the prices in long-term.

The high degree of Euroisation at a time when the target inflation regime is conducted can cause serious problems to the monetary authorities. Pass-through of exchange rate increases, thus making inflation unstable and more sensitive to the exchange rate changes. It also leads to weakening interest rate channel because the cash flows (loans, savings) are mainly in foreign currency and greatly beyond the control of monetary authorities due to which they are forced to rely on administra-

tive and prudential measures in order to retrieve confidence in the local curren-cy.[31]

In recent years Serbia is making significant efforts to reduce the use of foreign currencies in domestic financial system and strengthen the national currency. The National Bank and the Government agree to jointly determine and implement the Dinarisation strategy in 2012. The Memorandum on the Strategy of Dinarisation of the Serbian Financial System defines the objectives, measures and activities to be taken with a view to strengthening confidence in the national currency and pro-moting its use in the financial system. [32] The National Bank and the Government agreed to measure the degree of Dinarisation of the financial system by the share of Dinar in total loans. As supplementary criteria for the measurement of the de-gree of Dinarisation are used: the share of Dinar household and corporate deposits in total deposits, the maturity structure of Dinar loans and deposits, the currency structure of public debt, liquidity in primary and secondary markets of pure Dinar securities, the maturity structure of Dinar securities.

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[31] VILARET, S. -- PJEŠČIĆ, V. -- ĐUKIĆ, M. *Osnovne karakteristike i dosadašnje iskustvo Srbije u sprovođenju strategije ciljanja inflacije.* p. 11 Accessible online: http://mfin.gov.rs/download/pdf/ekonomska_istrazivanja/studije/Inflatorno%20targetiranje%20kao%20nov%20rezim%20monetarne%20politike%20u%20Srbiji.pdf
[32] Memorandum on the strategy of Dinarisation of the Serbian financial system, National Bank of Serbia, March 2012. Available online: https://www.nbs.rs/internet/english/30/MemorandumVladaDinarizacija_20120406_eng.pdf

Period		Share of Dinar in total lending, outstanding amounts			Share of Dinar in total deposits, outstanding amounts			Share of Dinar in total household savings	Share of Dinar in total public debt
		Corporates	Households	Total	Corporates	Households	Total		
2008		33.8	22.2	29.2	50.3	12.5	27.6	2.5	2.6
2009		26.2	22.1	24.7	52.5	10.9	25.6	2.1	12.8
2010		32.2	27.6	30.5	45.0	8.5	19.8	1.8	14.6
2011		27.3	32.6	29.2	44.9	10.1	21.5	2.4	16.1
2012		24.2	35.1	28.0	43.9	8.8	19.3	1.9	19.1
2013		20.2	37.9	26.8	52.4	11.5	23.1	3.5	20.3
2014		25.0	41.0	31.2	53.6	12.3	24.5	3.7	21.4
2015		19.3	42.8	28.6	55.6	13.9	27.2	4.3	21.2
2016	I	19.3	43.5	29.2	51.5	13.8	25.4	4.4	21.9
	II	19.1	45.0	29.8	51.1	14.2	25.8	4.3	20.8
	III	20.7	46.3	31.4	52.7	14.9	27.3	4.4	21.4

Table 3 Dinarisation indicators in %
Source: NBS

The implementation of Dinarisation strategy achieved significant results. Household Dinar savings in 2015 are around 3 times higher than at the end of 2012. More than two thirds of new household loans in 2015 were in Dinars, while the figure is even higher in 2016 (over 70%). In terms of macroeconomic stability and Dinarisation in the coming period, a positive signal is the appearance of Dinar housing loans in banks' offer under relatively favorable terms.

5 Summary and discussion

5.1 Summary

If we scrutinize advantages and disadvantages of Euro area membership we might say that in theory everything sounds promising, but the practice is different. We can distinguish between pros and cons of Euro adoption in Serbia. Good sides of Euro would be reduction of inflation, but only in short-term. After introduction of German Mark, inflation in Montenegro amounted to 7% in a long time period, before fiscal consolidation and other structural reforms were taken. With Euro in circulation, there will be no exchange risk and this is the most obvious advantage from Euro. Interest rates would fall down, but not too much. They depend on loan risk and this would not change quickly from the current situation. Transaction costs would be slightly lower depending on the currency stability. The biggest argument against Euro is that at the time of establishing the monetary union not all requirements were satisfied. There are a lot of dissimilarities between countries and monetary policy does not fit all. Other possible problems for Serbia can be seen on the examples of „peripheral" EU countries such as Greece and Spain. Borrowing seemed cheap, it became popular and finally led to over-indebtedness.

All benefits defined by currency union can happen only under certain circumstances. And here one should be led by idea of some countries which are pretty cautious when it comes to Euro adoption. Both good and wrong sides should be carefully considered. As suggested by Mundell's theory of Optimum Currency Area, the benefits of single currency union can be obtained only if the countries have symmetric shocks with EMU. For this reason the assessment of nominal and real convergence and position of Serbia in that process was carried out.

Year	2011	2012	2013	2014	2015
Inflation rate					
Average for 3 EU countries with lowest inflation	1.6	1.2	1.2	1.3	1.4
Reference value	3.1	2.7	2.7	2.8	2.9
Serbia	7	12.2	2.2	1.7	1.5
Long-term interest rate					
Average for 3 EU countries with lowest long-term interest rate	3.3	1.8	2.5	3.3	4.2
Reference value	5.3	3.8	4.5	5.3	6.2
Serbia	9.7	11.2	9.5	8	4.5
Budget deficit in % of GDP					
Reference value	-3	-3	-3	-3	-3
Serbia	-4	-5.9	-5.2	-6.3	-2.8
Public debt in % of GDP					
Reference value	60	60	60	60	60
Serbia	45.4	56.2	59.6	70.4	74.6
GDP per capita in PPS					
Euro area (19 countries)	108	107	107	107	106
Serbia	36	37	38	37	36
GDP growth in %					
Euro area (19 countries)	0.5	-1.1	0.7	1.3	2
Serbia	2.1	-2.7	3.3	-1.8	1.1
Employment rate					
Euro area (19 countries)	50.9	50.4	49.9	50	50.4
Serbia	38.9	38.7	40.3	41.8	42.4

Table 4 Nominal and real convergence – summary of selected economic indicators
Source: Eurostat, NBS

5.1.1 Fulfillment of Maastricht convergence criteria in Serbia

As the strategic priority of the Government is to join the European Union, the National Bank is also considerably engaged in activities relating to the fulfillment of Maastricht criteria, a prerequisite for all countries that intend to join the European Monetary Union. For this purpose, the fulfillment of five Maastricht criteria with regards to Serbia was evaluated. When it comes to inflation criteria, Serbia had the highest average inflation rate in the examined period from 2001-2015, but has done a lot in bringing prices down. The National Bank pursues inflation target regime strategy. Inflation target from January 2017 will decrease

from 4±1.5% to 3±1.5%. With current inflation rate of 1.6% we can conclude that there is extended period of low inflation, but still many steps will need to be taken in order to stabilize this indicator and create favorable conditions, since the price level in Serbia depends mainly on international developments. Fiscal consolidation and structural reforms showed the results when it comes to interest rates. By the end of 2016 the record low of 4.0% is reached, but still is above the Euro area average. A very significant economic result represents the budget deficit that in 2015 amounted to 2.8% which is below of the requirements of the Maastricht deficit criterion. The indebtedness of Serbia's public debt remains above the average. After 2008 it is denoted increasing trend as the country was fighting the effects of world economic crisis. The exchange rate criterion could not be formally assessed since Serbia does not participate in ERM II.

5.1.2 Economic alignment of Serbia with Euro area

The analysis of real convergence measured by GDP per capita in purchasing power parity compared with other countries aspiring to join EMU showed that Serbia is far away from the average level of income that exists in Euro area. Among all examined countries, only Macedonia had worse performance. Over the last five years Serbia reduced the share of agriculture, which means that is achieved progress in adjusting the structure of the economy to the one that exists in Euro area. The coherence of business cycles on the basis of development in the annual GDP growth rates observed by correlation analysis approach indicated not so bad result. With correlation coefficient of 0.63 Serbia is along Poland the least correlated among the group of countries included in analysis. With the increase of trade with European Union in future this result will only improve.

5.2 Discussion

It is clear that the country does not fulfill all criteria. If the country decides for unilateral adoption as was the case of Montenegro, this would only make

negotiating process longer, since the country has been granted a status of candidate and European Central bank does not approve unilateral adoption. The case of Montenegro is specific, a combination of different, mostly political circumstances. The question is what will happen when Montenegro eventually enter the EU. It is not excluded that they will be asked to give up the Euro, because membership in EU is one, and the EMU membership is other thing.

For the economic instability in Serbia is responsible the National Bank and poor monetary policy conducted over the past decade. The characteristics of domestic economy cannot be ignored while blindly implementing monetary techniques of Western economies. Monetary policy in Serbia relies on the concept of inflation targeting. This means that when inflation threatens to get out of the target frame, the NBS raises interest rates and reduces the amount of money in circulation. Unfortunately, this adjusting mechanism cannot give results in Serbia. The economic context differs from those countries where controlled market and developed economic and legal institutions and regulations exist.

The exchange rate itself can never act to ensure a long-term stability of an economy. Hence, the introduction of Euro as a stable currency or fixed exchange rate appear as a solution. The introduction of Euro would not solve economic problems. One of the greatest problems in Serbia is the high public spending. In case of switching to Euro, country would be unable of transferring the foreign money. There would appear the lack of the Euro in the system, since the new foreign currencies can come only through the export of our goods and services or foreign direct investments. The stability of Dinar exchange rate is certainly desirable, but cannot be the only goal of monetary policy, especially preserving the wrong value of Dinar. Long-term exchange rate stability is possible only in an economy whose main accounts are in the balance. The overrated Dinar exchange rate is always unstable and requires high maintenance costs.

Reduction in the value of a Dinar is much lower than it would have had to be based on economic fundamentals of Serbia. The price of such policy can be clearly seen through the large drop in the employment rate in Serbia, trade deficit and unstable

inflation. Interest rates in Serbia are still on large scale. This is the level that far exceeds those in the region. With high interest rates the economy cannot improve, and thus remains trapped in recession or stagnation. Another problem is foreign banking system. Almost all credit operations are carried out in foreign currency. With the financial system in foreign ownership and wrong monetary policy, the domestic inflation can be held on low levels only at the cost of sacrificing the economic growth. If we look at the period from year 2005 to 2016, GDP growth reached 5.9% in 2007 and now is barely 2%. Therefore, the current decline in inflation is merely the result of a steady decline in domestic demand and continuing stagflation on the one hand, and high interest rates on the other. As the economy is in worse shape, the more easily NBS can fulfill their anti-inflation objective, at least in short-term. Also, it is important to mention that the NBS does not have fully independence from the Government.

5.3 Recommendations

The exit from current situation can be reached by a law that will control the payment terms. In addition, it is necessary to break the monopolistic and cartel market structure, as well as regulating and standardizing payment where the state appears as a buyer. Only these measures can act in order to prevent and reduce inflation in long-term and strengthen the effectiveness of monetary policy. At the same time, this will protect small and medium enterprises from the powerful monopoly. And of course, it is necessary to stop the inflow of speculative capital which also represents generator of inflation. The role of the Government also needs to change. The National Bank should have all freedom in bringing decisions about monetary policy, while Government's role should be supportive.

Conclusion

This thesis tried to determine whether Serbia should adopt Euro. The reason for examining this topic was the high Euroisation index, the highest one in the South Eastern Europe. After analysis of nominal and real convergence that are performed in order to determine the level of preparedness of country in the case that decides to unilaterally adopt Euro and considering all possible advantages and disadvantages of the of Euro area membership, the conclusion that Serbia should remain the national currency is reached. This conclusion is also based on the experience of countries that are already members of Euro area.

The promotion of Euroisation in Serbia claiming that it will bring immediate monetary benefits is absurd. It should be noted that some large economies such as UK, Denmark or Sweden decided to keep the control over monetary policy and not adopt Euro. After examining the level of nominal and real convergence, we can also conclude that the Czech Republic does not differ much from the best EU performer Germany, but still, the country is pretty cautious when it comes to Euro adoption. It does not refer to the „proudness of national currency", but real economic and financial image. It is questionable what consequences would the monetary policy of the European Central Bank have for a country that decides to switch to Euro, even without ECB's permission. There is no guarantee that EMU membership would lead to economic stability.

Dinarisation strategy implemented jointly by the National Bank of Serbia and Government from 2012 gave some results. It is very lengthy process and current efforts cannot change the economic situation immediately. The main goal of this strategy is that Dinar gets the role which Euro has now. That means that Dinar savings and loans take over foreign currency savings and loans. The key is to achieve long-term price stability, economic efficiency and significant export. The Government needs to have the decisive role in promotion of Dinar savings, which by their measures and macroeconomic policy should encourage more saving and

return the trust in national currency. The precondition for greater Dinar savings are the stability of domestic currency and low inflation and this can be reached by lower interest rates. Interest rates on loans in Serbia are the highest among the countries in region and unless this change, the Euro will bring more safety because it does not bear the risk of exchange rate difference and inflation.

Since the national currency is not an obstacle to economic prosperity of the country, Serbia cannot ensure the macroeconomic stability by simple Euro adoption as suggested by some economists and politicians, but above all, by the real exchange rate of Dinar and radical change of economic and development policy and economic structure.

I am of the opinion that Serbia should strive to Euro adoption, but only after membership in the European Union, which is still far away and questionable since the perception about EU changed over time and other alternatives are being considered. This bachelor thesis can serve as a base for further analysis concerning the topics about Euroisation, especially can serve to other countries in South-Eastern Europe when considering Euro introduction.

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List of abbreviations

bln	billion
C.V.	coefficient of variation
CBM	Central Bank of Montenegro
CPI	Consumer Price Index
ECB	European Central Bank
ECOFIN	Economic and Financial Affairs Council
EMU	European Monetary Union
ERM	Exchange Rate Mechanism
EU	European Union
Fed	Federal Reserve System
FX	Forex
GDP	Gross Domestic Product
HICP	Harmonized Index of Consumer Prices
NBRM	National Bank of the Republic of Macedonia
NBS	National Bank of Serbia
OCA	Optimum Currency Area
OeNB	Oesterreichische Nationalbank
p.p.	percentage point
PPS	purchasing power standards
UK	United Kingdom

Attachments

	EA	BUL	CZE	GER	CRO	HUN	POL	ROU	SLO	SVK	MNE	MKD	SRB
EA	1												
BUL	0.79	1											
CZE	0.92	0.92	1										
GER	0.92	0.60	0.73	1									
CRO	0.86	0.98	0.95	0.67	1								
HUN	0.81	0.67	0.82	0.70	0.74	1							
POL	0.65	0.68	0.68	0.54	0.67	0.26	1						
ROU	0.74	0.89	0.79	0.62	0.91	0.72	0.51	1					
SLO	0.92	0.92	0.95	0.77	0.95	0.78	0.71	0.87	1				
SVK	0.90	0.93	0.91	0.79	0.94	0.65	0.71	0.84	0.95	1			
MNE	0.83	0.90	0.83	0.72	0.91	0.64	0.75	0.89	0.92	0.92	1		
MKD	0.79	0.90	0.85	0.60	0.88	0.66	0.69	0.84	0.93	0.87	0.94	1	
SRB	0.63	0.92	0.74	0.49	0.87	0.51	0.57	0.82	0.76	0.84	0.88	0.83	1

Table 5 Correlation coefficients of real GDP growth rate between selected countries for the time period 2005-2015
Source: Own calculations based on Eurostat data

	Average	Maximum	Minimum	C.V.
Euro area	1.7	3.3	0	63.5
Bulgaria	3.82	12	-1.6	107.5
Croatia	2.35	5.8	-0.3	70.6
Czech republic	2.05	6.3	0.3	84.8
Hungary	3.77	7.9	0	64.2
Macedonia	2.16	6.1	-1.6	109.5
Montenegro	2.97	7.7	-0.3	90.7
Poland	2.25	4.2	-0.7	74.8
Romania	4.87	9.1	-0.4	57.2
Slovakia	2.13	4.3	-0.3	80.7
Slovenia	2.15	5.5	-0.8	77.6
Serbia	**7.76**	**17.7**	**1.5**	**63.9**

Table 6 Descriptive statistics of HICP and CPI inflation, in the time period 2005-2015
Source: Eurostat, NBS, NBRM, CBM