The Maastricht Criteria - Introduction of the Euro in the Republic of Croatia

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A scientific paper

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THE MAASTRICHT CRITERIA - INTRODUCTION OF THE EURO IN THE REPUBLIC OF CROATIA

ABSTRACT

Based on statistical data, the aim of this paper is to examine and consider nominal convergence criteria (also known as Maastricht criteria) which the Republic of Croatia was obligated to fulfil by signing Treaty on European Union, and to analyse whether and to what extent these criteria have been met. Maastricht criteria are a contemporary topic of significant importance for all citizens of the Republic of Croatia. Although majority of Croatian population are not aware of the intricacies behind this process, it is very important for fiscal and monetary policy creators. The significance of this process is reflected in the fact that the decision on joining Economic and Monetary Union is changing the everyday life of Croatian citizens. The Croatian official currency 'kuna' will no longer be in circulation, with the euro becoming the new official currency, which brings many advantages and disadvantages. The paper defines the concept of Economic and Monetary Union with the planned phases within which the project was realized, after which the basic characteristics of the Maastricht criteria are presented. Each criterion is presented theoretically with its relation to the Republic of Croatia on the basis of statistical data which determined the meeting of the criteria. The last part presents reflections of various authors on the euro area, as well as different theses on the effects of the introduction of euro for the Republic of Croatia. This paper provides a summary of a historical overview of the origin of EMU with its criteria to be met and an insight into a current situation of criteria fulfilment by the Republic of Croatia. Also, it contributes to raising the general awareness of citizens about the issue of introduction of the euro and it enables understanding the possible effects that the current situation brings to the Croatian economy.

Key words: *Maastricht criteria, convergence criteria, introduction of the euro.*

1. Introduction

One of the current topics that concerns not only the scientific and economic community, but also the general public, is the introduction of the euro as the official means of payment in the Republic of Croatia. Croatia has been a member of the European Union since 1 July 2013. By

signing the Maastricht Treaty, it committed itself to membership in the Economic and Monetary Union (EMU), which implies the obligation to introduce the euro as the official currency in the Republic of Croatia. All Member States that joined the European Union after 1992 have been barred from the opt-out clause (exemption from the introduction of the euro), so all new members must introduce the euro.

For the euro to become the official means of payment, the Maastricht criteria need to be met. They determine four areas of nominal convergence, namely: price stability, sound public finances, exchange rate stability and long-term interest rates. The aim of this paper is to review the fulfilment of these criteria on the example of the Republic of Croatia with concrete data for individual macroeconomic variables in a multi-year period. The euro is a controversial topic because economists have divided opinions on its strengths and weaknesses within Europe's large geographic market.

In the paper, the theoretical framework of Economic and Monetary Union (EMU) is defined, which is needed for understanding the purpose of the Maastricht criteria, after which the stages through which EMU was realized are presented. After that, the Maastricht criteria are theoretically clarified, on the basis of which the data for the Republic of Croatia are analysed, in order to explicate the satisfaction of each individual criterion. Finally, the paper presents some of the views on the introduction of the euro as the official currency in Croatia, and the euro area and its impact on the Republic of Croatia.

2. Economic and Monetary Union of the European Union (EMU)

Economic and Monetary Union (EMU) is a project created by the European Union to harmonize the economic and monetary policies of all member states, with the main goal of such an organization being the creation of a single monetary area where the euro is the common currency.[1] There is no central economic governance in EMU, and the responsibility is shared by the Member States and the various EU institutions.[2] The euro was adopted as the official currency by all the initial members of the EU, except for the United Kingdom and Denmark, which withdrew from the adoption of the euro. After Brexit vote in June 2016 the central bank of the UK helped the country not to recede with the set of monetary instruments and measures (Trifonova, 2019). The UK subsequently left the EMU in 2020 following a Brexit referendum.[3] Hitherto, the euro has been adopted by 19 countries. Croatia, Romania and Bulgaria wish to introduce the euro as their official currency, while the remaining five countries do not. Denmark has no legal obligation to join the euro area (exemption clause), and Sweden, Hungary, the Czech Republic and Poland, although legally obliged to adopt the euro, have decided to postpone the process indefinitely, citing the cost of losing monetary sovereignty as a key economic argument (Lakić, 2021). The process of introduction of the euro as an official currency of a country is a result of a long lasting preparation with many demands and criteria that need to be met, in order to enable the country to integrate into the European market and abandon the national monetary policy (Kordić et al., 2021).

The historical beginnings of EMU date back to the early 1970s when European leaders set a new goal of European integration – EMU, with the ultimate goal to achieve full liberalization

[1] Ekonomska i monetarna unija, https://enciklopedija.hr/natuknica.aspx?ID=69898 (accessed 17 July 2021)
[2] Povijest ekonomske i monetarne unije, https://www.europarl.europa.eu/factsheets/hr/sheet/79/povijest-ekonomske-i-monetarne-unije (accessed 17 July 2021)
[3] European Economic and Monetary Union – EMU, https://www.investopedia.com/terms/e/emu.asp (17 July 2021)

of movement of capital, full convertibility of member states' currencies and irrevocable fixation of exchange rates.[4] The creation of EMU was re-initiated in 1988, when it was agreed that it would be realized in three interconnected stages (Vizjak and Vuković, 2001). Some of the activities are the abolition of restrictions on movement of capital between member states, the establishment of the European Monetary Institute, the establishment of the European Central Bank, the regulation of central banks, the introduction of the euro, the Stability and Growth Pact, etc.[5]

The first stage of EMU was realised within the institutional framework of the then European Economic Community (EEC). However, for the needs of the second and third stages, the solution was found in the revision of the Treaty on the European Economic Community. This was achieved in February 1992 with the signing of the Treaty on European Union in the Dutch city of Maastricht. Due to the place of signing, the treaty is recognisably called the Maastricht Treaty. Among other things, it set the conditions that member states must meet to participate in the third stage of EMU, i.e. the criteria for the introduction of a single common currency - the euro (Curavić et al., 2005). The treaty was signed by 12 countries (Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain and the United Kingdom) and it officially entered into force on 1 November 1993.[6] All countries that joined the EU after 1992 had to sign the Maastricht Treaty, thus committing themselves to the introduction of the euro, without the option of an opt-out clause (exemption from the introduction of the euro) (Curavić et al., 2005). However, the Maastricht Treaty or any other EU legislative does not prescribe specific timeline for adopting euro (Dentons, 2020). Thus, it is possible to delay the introduction of the euro so that the state does not access the exchange rate mechanism (ERM II). But, Ćorić and Deskar-Škrbić (2017) pointed out how ERM II serves as an important policy credibility anchor and also, how the entrance into ERM II phase can motivate a state to pursue policies in a manner of fasten euro adoption. Also, Čehulić and Hrbić (2019) pointed out how the example of the introduction of the euro in other countries had the positive effects in short-term with a slightly negative effect of costs increases, while long-term effects are more difficult to predict since it depends on a future economic development of the country.

3. Maastricht Criteria

In order to join the Eurozone, each member state of the EU must meet the convergence criteria (Maastricht criteria). According to Marić (2015), two types of convergence are distinguished, namely the nominal and the real one. Nominal is prescribed by the Maastricht Treaty and includes fiscal and monetary convergence. Nominal convergence represents the formal conditions for joining the euro area. Real convergence is not a condition, but it is very important for the candidate country because it refers to the real state of the economy. Real convergence seeks to achieve economic development equivalent to the average of EU member states. Some of the indicators used to monitor real convergence are GDP per capita, unemployment rate, purchasing power parity, real exchange rate, average wage level, price indices, etc. By observing real convergence, real benefits and costs of entry to the EMU can be recognised.

[4] Povijest ekonomske i monetarne unije, https://www.europarl.europa.eu/factsheets/hr/sheet/79/povijest-ekonomske-i-monetarne-unije (accessed 17 July 2021)
[5] Ekonomska i monetarna unija, https://www.ecb.europa.eu/ecb/history/emu/html/index.hr.html (accessed 18 July 2021)
[6] Pet činjenica koje trebate znati o Ugovoru iz Maastrichta, https://www.ecb.europa.eu/explainers/tell-me-more/html/25_years_maastricht.hr.html (accessed 1 September 2021)

Kesner-Škreb (2006) categorises the Maastricht criteria into four areas, with the area of public finance having two sub-areas:

1. Price stability
2. Public finance
    a. General government budget deficit
    b. General government debt
3. Exchange rate
4. Long-term interest rate

In the continuation of the paper, each criterion is theoretically presented, and concrete data on the movements of individual economic variables in a multi-year period are presented on the example of the Republic of Croatia.

3.1. Price Stability Criterion

Article 140 (1), first indent, of the Treaty on the Functioning of the EU is related to the criterion of price stability. It states that the Member State must have a sustainable level of price stability. The criterion of the average annual inflation rate is also specified, which states that inflation must not exceed 1.5% in relation to the three best performing Member States in terms of price stability. Inflation is measured by the CPI, i.e. the consumer price index.[7]

In the economic literature, inflation is described as an increase in the general price level or, equivalently, a decrease in the value of money (Benić, 2016). Often, the main goal of a country's monetary policy is price stability, a term that denotes a state in which the price level is neither rising nor falling (Borozan, 2019).

Economists and scientists do not share unanimous views on determining which inflation rate is optimal for the economy of a single country. According to a study by Kryvtsov and Mendes (2015), most central banks take a value of around 2% as a monetary policy target and thus also a desirable inflation rate. The 2% target has gradually gained credibility as it is considered to be a stable and achievable target. However, some economists state that inflation should be higher than 2%. Benić (2016) states that it is important to carefully consider the transition and long-term costs associated with higher inflation, where positive inflation growth is desirable, while lower values or even deflation can have severe consequences for the economy. For example, with the growth of prices, the profit of a company grows, and accordingly also its investments. If prices continued to fall, buyers and producers would delay buying in hope of lower prices in the future, resulting in a downturn in the economy because there would be no investments and consumption.

Inflation rate (π) is calculated according to the following formula:

$$\pi = \frac{P_t - P_{t-1}}{P_{t-1}}$$

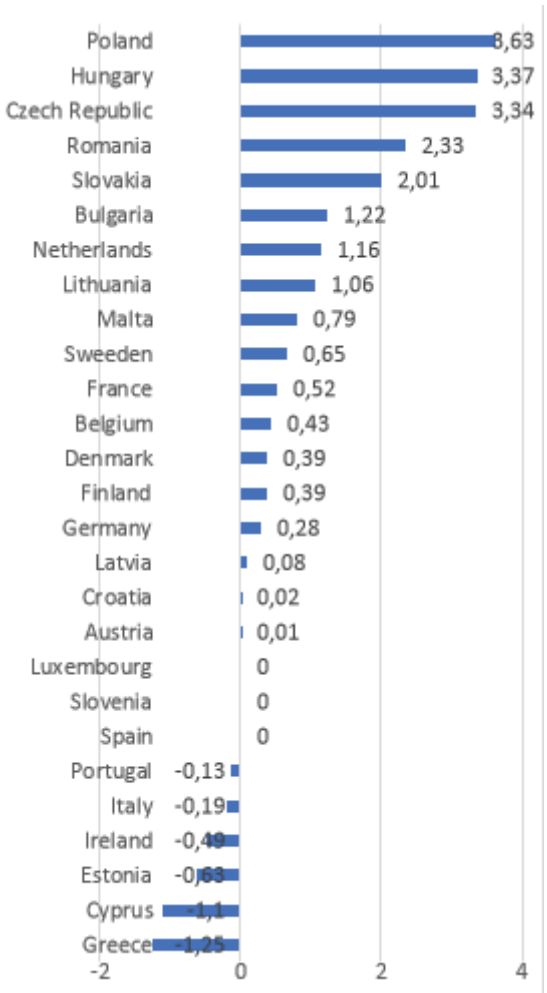
where P_t indicates the price level in the current year, and P_{t-1} indicates the price level in the previous year. To see the relationship with the base year, the symbol P_{t-1} will indicate the base year (Borozan, 2019).

[7] Konvergencijski kriteriji, https://www.ecb.europa.eu/ecb/orga/escb/html/convergence-criteria.hr.html (accessed 26 July 2021)

Consumer price index (CPI) is an economic indicator which examines the weighted average price of a basket of consumer goods and services, such as transportation, food, clothing, and medical care. It is calculated by taking into account changes in prices for each item in a predetermined basket of goods used by the reference urban household of that country[8] "The consumer price index can have different purposes and serve to measure inflation, preserve value in contracts with index clauses (e.g. for indexation of wages in collective agreements, indexation of pensions, etc.), comparison of domestic price movements between certain economic sectors, as a basis for deflation of certain categories of national accounts and other statistical series, and is used for analytical purposes"[9]. The CPI has been calculated in Croatia since January 2004.

Graph 1 shows the movements of the average annual inflation rate calculated on the basis of the data of the harmonised index of consumer prices. The CPI is presented in relation to the base period of 2015 (2015 = 100). The graph depicts the calculated values of the CPI change rate for 2020, compared to 2019.

Graph 1: The average annual inflation rate in the EU in 2020



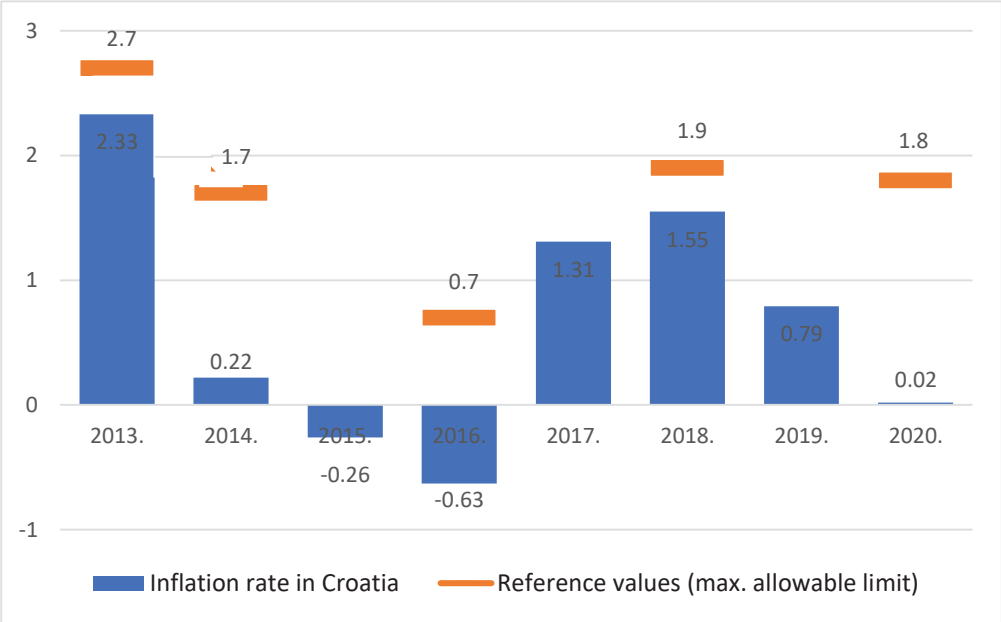
Source: Authors, according to Eurostat – Harmonised index of consumer prices (HICP), https://ec.europa.eu/eurostat/databrowser/view/prc_hicp_aind/default/table?lang=en (accessed 14 August 2021)

[8] Consumer price index, https://www.investopedia.com/terms/c/consumerpriceindex.asp (accessed 31 July 2021)
[9] Indeksi potrošačkih cijena u prosincu 2020., https://www.dzs.hr/Hrv_Eng/publication/2020/13-01-01_12_2020.htm (accessed 31 July 2021)

Most countries recorded low inflation rates in 2020. Exceptions were Poland, Hungary and the Czech Republic, which had inflation higher than 3%. On the other hand, five EU member states faced deflation in 2020. Among those, Greece had the largest deflation of -1.25%.

Graph 2 shows the movements of the average annual inflation rate in the Republic of Croatia for the period from 2013 to 2020. The base year is 2015. The benchmarks are shown for 2013, 2014, 2016, 2018 and 2020 because the Convergence Report is published every two years. Due to a special request from Latvia, an additional report was prepared in 2013, so 2013 is an exception to the regular schedule for publishing reports.

Graph 2: Inflation rate trends in the Republic of Croatia



Source: Autors, according to Eurostat – Harmonised index of consumer prices (HICP), https://ec.europa.eu/eurostat/databrowser/view/prc_hicp_aind/default/table?lang=en (accessed 14 August 2021)

The graph clearly shows that inflation in Croatia has been stable since 2014 and ranges between -1% and 2% in the reference period. The reference values have not been exceeded in the last seven years since Croatia became a member of the EU. According to the presented data, Croatia meets the Maastricht criterion of price stability.

3.2. Public Finance Criterion

Kesner-Škreb (1998) states that public finance is one of the oldest economic branches. In order to rule successfully, politicians sought expert advice on various economic issues related to public administration such as taxes, financing of the military and the like. There is a common belief that public and private sectors cannot function without each other, i.e. both are stakeholders in the economy where they are connected and interdependent. The public finance sector serves to guide, correct and complement the functioning of market mechanisms, and the goal of public finance is to find the optimal solution in the sphere of public revenue and expenditure.

There are three types of budget in the Republic of Croatia - state, central and general. The state budget consists of revenue and expenditure of budget users such as the Government, the

Croatian Parliament, state agencies, etc. The central budget encompasses the state budget and the budget of extra-budgetary funds, such as HZMO (Croatian Pension Insurance Institute), HZZ (Croatian Employment Service), HZZO (Croatian Health Insurance Fund) etc., while the general government budget includes all three levels of the budget. It is worth mentioning that the central and general budgets are consolidated budgets. The word 'consolidated' in this case refers to the fact that mutual transactions between the budgets of local and regional self-government units, extra-budgetary funds and the state budget have been annulled (Borozan, 2019).

The Maastricht criteria distinguish between two categories of public finance criteria that need to be met. These are the general government budget deficit and general government debt (public debt), which are presented in more detail below.

3.2.1. General government budget deficit

The budget deficit arises when the state has expenditure which is higher than its revenue. If the state has a budget deficit, it has to be financed in some way. The most common form of financing is borrowing. It includes the sale of treasury bills, bonds on the domestic and foreign markets and raising loans (Bićanić and Deskar-Škrbić, 2018). Economists consider borrowing to be the most favourable option because it does not affect or result in the smallest increase in prices (Borozan, 2019). According to Bićanić and Deskar-Škrbić (2018), there are five ways to finance the budget deficit:

1. Borrowing (government issues bonds or takes out a loan)
2. Monetisation (the central bank gives a loan to the state) - a highly undesirable form that often leads to hyperinflation. In Croatia, monetisation of the budget is prohibited.
3. Sale of state property - assets are long-term, while the deficit is short-term, therefore privatisation must be part of the strategy of state property management. In Croatia, state property is often sold to cover debts urgently, which is unacceptable (for example, a hotel is sold to pay debt to doctors)
4. Non-payment of bills and extension of payment deadlines - since the market economy is based on orderly payment of debts and compliance with contracts, the government sets a bad example for others
5. Inflation profit (central bank profit is transferred to the budget).

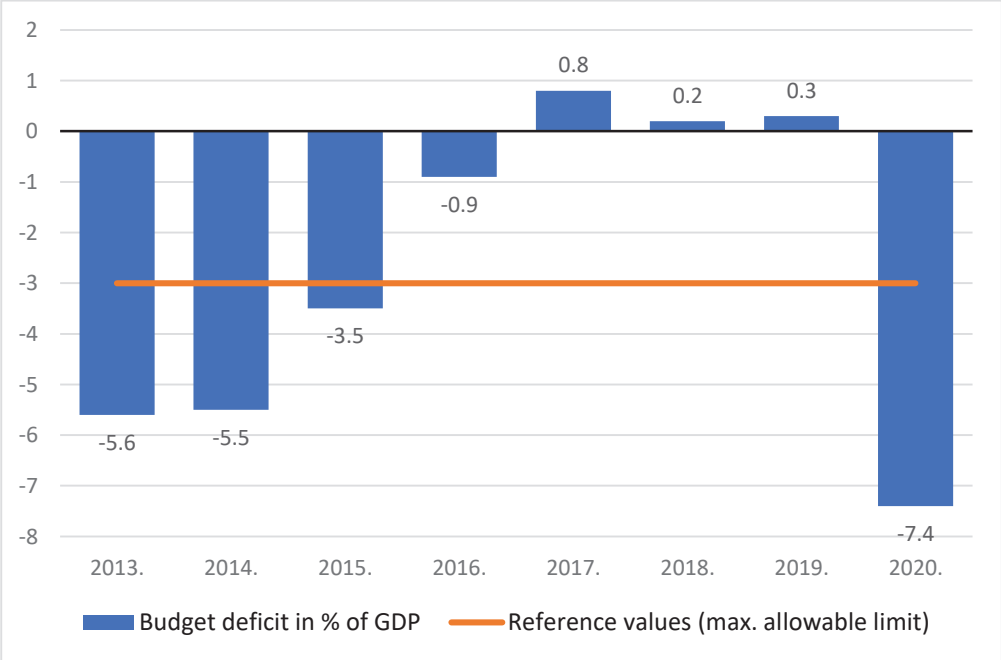
Hoxha and Kryeziu (2021) examined the impact of the fiscal deficit on the economic growth of Eurozone member states. When it comes to policy recommendations for the euro area countries that were the subject of the study, it is worth noting that, although the fiscal deficit is in most cases good for economic growth, the level of the deficit should be controlled by governments. In the long-term period, high deficits can harm economic growth and create imbalances in other macroeconomic variables. The occurrence of anomalies with a permanent deficit above the permissible limits, especially in the long term, can have major consequences for the countries that are the subject of this study. When the impact of the COVID-19 pandemic is added to the equation, the situation in these countries becomes even more complicated.

According to Šonje (2019), the general government budget deficit criterion stipulates that the ratio of budget deficit to nominal GDP must not exceed 3% for the previous year, and also, this ratio must be continued in the European Commission's projections for the next two years.

If the stated limit is exceeded, the criterion is still met if there has been a constant and significant reduction in the ratio in previous years or if exceptional circumstances of a temporary character, such as a major economic downturn, have occurred. In case of non-compliance with the criteria, the Council initiates the excessive budget deficit procedure.

Graph 3 depicts the general government deficit as a percentage of GDP for the Republic of Croatia in the period 2013-2020. The horizontal red line shows a value of -3% below which the ratio must not fall in order to meet the stated criterion.

Graph 3: General government budget deficit (% of GDP) in the Republic of Croatia



Source: Authors, according to Eurostat - General government deficit (-) and surplus (+), https://ec.europa.eu/eurostat/databrowser/view/teina200/default/table?lang=en (accessed 14 August 2021)

In the first three years of membership in the EU, Croatia did not meet this criterion, while after 2015 it achieved a significant reduction in the general government budget deficit, while in 2017, 2018 and 2019 it achieved a surplus. However, due to the COVID-19 crisis, in 2020 government spending was increased, so there was a decline of -7.4%. Given that this crisis is an exceptional circumstance of a temporary character, it can be considered that Croatia still meets this criterion.

3.2.2. General government debt (public debt)

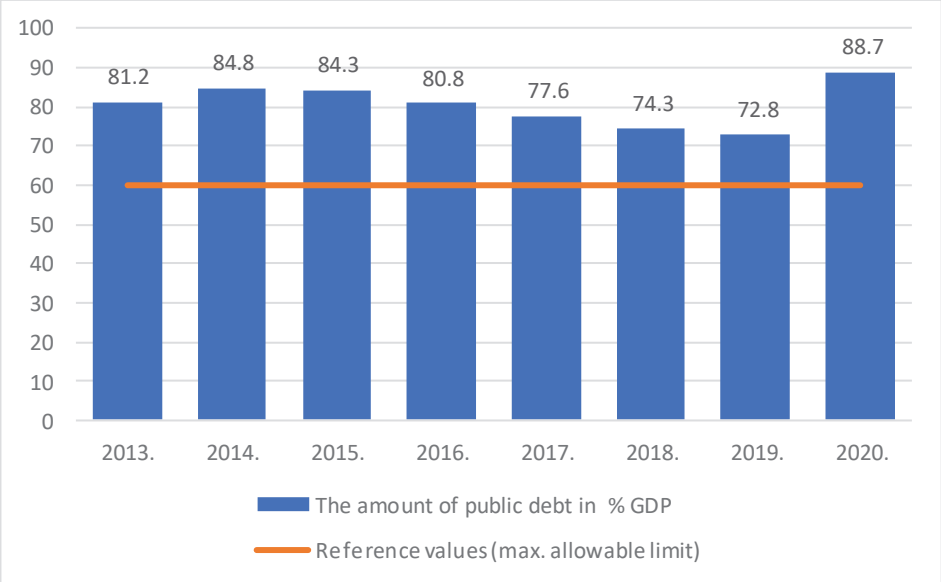
Government (public) debt is the amount that the government has borrowed in order to finance budget deficits. The cause of public debt can be a contraction in business activities or poor macroeconomic or fiscal policy. High public debt does not necessarily mean that a country's economy is collapsing, but rising debt indicates that economic growth will decelerate significantly (Borozan, 2019). General government debt is presented in accordance with the

European System of National and Regional Accounts of 2010 and veritably represents "gross nominal consolidated debt excluding accrued unpaid interest".[10]

The general government debt criterion prescribes a limit on the size of public debt where it is defined that debt must not exceed 60% of the value expressed as a percentage of nominal GDP. If in previous years the ratio exceeded the threshold, it is necessary to approach the level of 60% at a satisfactory defined speed (Šonje, 2019). This exception was more clearly defined in 2011 when it was determined that the rate of reduction must be 1/20 of the difference in the medium term (three years). "For example, if in 2017 the difference was 22 percentage points, then the debt in 2018 would have to be reduced by 1.1 percentage points" (Bićanić and Deskar-Škrbić, 2018, 106).

Graph 4 presents the share of public debt as a percentage of GDP for the Republic of Croatia in the period from 2013-2020. Croatia has never met the 60% requirement.

Graph 4: Public debt (% of GDP) in the Republic of Croatia



Source: Authors, according to Eurostat - General government gross debt, https://ec.europa.eu/eurostat/web/products-datasets/-/tipsgo10 (accessed 14 August 2021)

Since 2014, the share of public debt has been declining towards the 60% reference value. As with the general government budget deficit, in 2020, due to the COVID-19 crisis, public debt increased dramatically to as much as 88.7%. With the exception of 2020, and if the exception to the criterion is taken into account, it can be said that the Croatia meets this criterion because in previous years there was a clear tendency of public debt reduction.

3.3. Exchange Rate Criterion

The exchange rate can be defined as the price of one currency against another. Considering such an analogy, economists distinguish two types of quotations. The directly quoted exchange rate is the price of foreign currency in domestic currency (e.g. 1€ = 7.5kn), while

[10] Dug opće države, https://www.hnb.hr/statistika/statisticki-podaci/opca-drzava/dug-opce-drzave (accessed 13 July 2021)

the indirectly quoted exchange rate represents the price of domestic currency in foreign currency (e.g. 1kn = 0.13333€). The exchange rate and its changes affect many components of the national economy such as imports and exports, relative prices, development dynamics, competitiveness, redistribution of national income, etc. (Lovrinović, 2015).

Under the Maastricht Treaty, the exchange rate criterion stipulates that a Member State must not devalue the central parity of its euro-denominated currency. The period of observation for this criterion is during the length of stay of a member state in the ERM II currency arrangement, i.e. two years before the introduction of the euro, provided that there are no serious tensions in the foreign exchange market (Šonje, 2019). The permissible fluctuation band between the euro and the domestic currency is a maximum of ± 15%.[11]

In order to apply for accession, Croatia had to take 19 measures in six areas, including "further strengthening of banking supervision by establishing close cooperation with the ECB, upgrading the macroprudential framework, strengthening the anti-money laundering framework, improving collection, drafting and dissemination of statistical data, improving public sector governance, and reducing administrative and financial burdens".[12] On July 10, 2021, the Croatian kuna entered the ERM II exchange rate mechanism, when the central parity of the Croatian kuna was determined at the level of: 1 euro = 7.53450 kuna.[13] Therefore, during the stay in ERM II, the Croatian kuna must not exceed the lower limit of 6.40432 and the upper limit of HRK 8.66467 for 1 euro, which should not represent a problem since the exchange rate regime in Croatia was managed and fluctuating, where the CNB managed the kuna against the euro, so in the previous period the exchange rate was stable.

3.4. Long-term interest rate criterion

The long-term interest rate criterion stipulates that the average nominal long-term interest rate must not exceed 2% in relation to the three Member States that have achieved the best value in terms of price stability. Interest rates are viewed on the basis of long-term government bonds with a maturity of 10 years.[14]

Graph 5 depicts the movement of the average nominal long-term interest rate on government bonds of the Republic of Croatia for the period from 2013 to 2020. The benchmarks are shown for 2013, 2014, 2016, 2018 and 2020 as the Convergence Report is published every two years. 2013 is an exception to the regular publication schedule due to a special request from Latvia.

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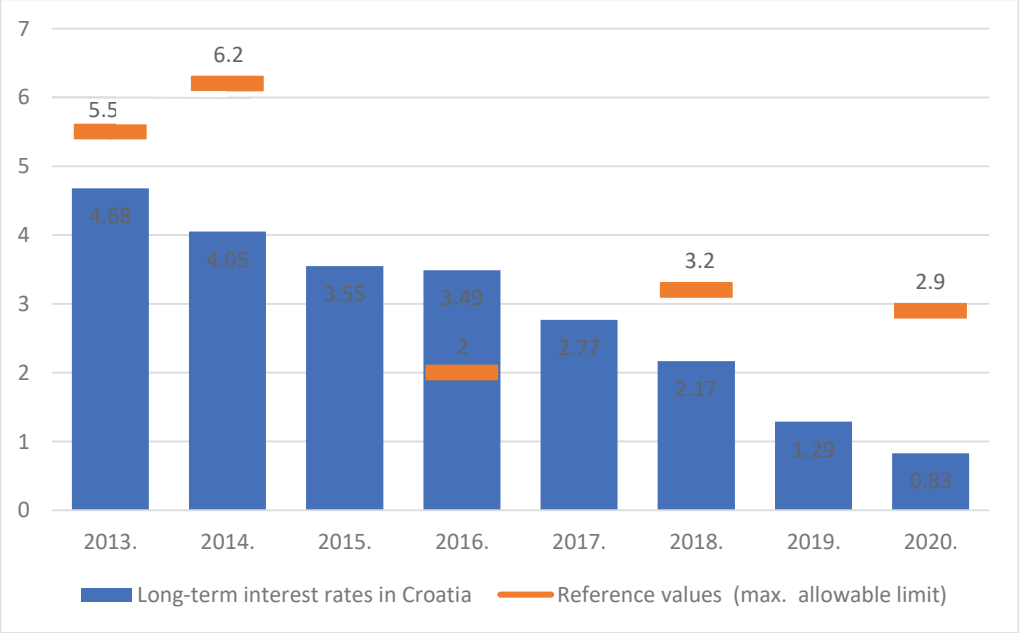
[11] ERM II – the EU's Exchange Rate Mechanism, https://ec.europa.eu/info/business-economy-euro/euro-area/introducing-euro/adoption-fixed-euro-conversion-rate/erm-ii-eus-exchange-rate-mechanism_en (accessed 27 August 2021)

[12] Što je bilo potrebno poduzeti da Hrvatska uđe u ERM II i koliko dugo se očekuje da će Hrvatska provesti u tom mehanizmu do uvođenja eura?, https://euro.hnb.hr/-/sto-je-bilo-potrebno-poduzeti-da-hrvatska-u-e-u-erm-ii-i-koliko-dugo-se-ocekuje-da-ce-hrvatska-provesti-u-tom-mehanizmu-do-uvo-enja-eura- (accessed 14 August 2021)

[13] Prijevod priopćenja o ulasku Hrvatske u ERM II, https://www.hnb.hr/-/communique-on-croatia (accessed 14 August 2021)

[14] Konvergencijski kriteriji, https://www.ecb.europa.eu/ecb/orga/escb/html/convergence-criteria.hr.html (accessed 14 August 2021)

Graph 5: Long-term interest rate in the Republic of Croatia



Source: Authors, according to Eurostat - EMU convergence criterion series, https://ec.europa.eu/eurostat/databrowser/view/irt_lt_mcby_a/default/table?lang=en (accessed 14 August 2021)

The graph shows the trend of decreasing of long-term interest rate in the Republic of Croatia over a multi-year period. Based on the available data, the Republic of Croatia exceeded the reference value in 2016, while in other years it was within the prescribed limits. In conclusion, it can be said that Croatia meets the Maastricht criterion of long-term interest rate.

4. The euro as the official currency

The euro is the monetary unit and currency of the EU. There are many advantages, as well as many disadvantages for an individual country which gives up its national currency and introduces the euro as the only official currency in its country. In addition to the above mentioned, there are many advocates, as well as many opponents of the introduction of the euro as the official currency of each country. Alongside economists, who argue their reasons "for" and "against" the introduction of the euro, citizens also have their opinion on this topic, since they are directly affected by the process of introduction of the euro. Among others, the Britannica website lists arguments "for" and "against" the introduction of the euro.[15] At the time of the creation of the euro in the 1990s, proponents of the euro believed that a common European currency could improve trade relations by eliminating the exchange rate (eliminating currency risk) and reducing prices. Contrarily, the loss of national sovereignty and identity were cited as arguments against the euro. Despite the above mentioned, 11 countries officially joined the EMU in 1998 where the euro was introduced as a non-cash monetary unit in 1999, and banknotes and coins appeared in the participating countries on 1 January 2002. After 28 February 2002, the euro became the single currency of the 12 EU Member States, and their national currencies ceased to be legal tender. The euro is represented by the € symbol, and today the euro is used as the official currency by 19 EU member states.

[15] Euro, https://www.britannica.com/topic/euro (accessed 15 August 2021)

4.1. The Eurozone

The Eurozone, officially known as the euro area, is a geographical and economic region made up of all European Union countries which have fully adopted the euro as their national currency, and is home to approximately 340 million people. In 1992, the Maastricht Treaty paved the way for the creation of a common economic and monetary union consisting of a central banking system, a common currency and a common economic region, the Eurozone.[16]

One of the biggest advantages of the introduction of the euro is the elimination of currency risk. Mursa (2014) explains that continuous exchange rate fluctuations between two or more currencies increase uncertainty and risk for foreign exchange companies and discourage the transfer of goods and services across national borders. Therefore, the elimination of currency risk increases trade between Eurozone members, but also trade with the rest of the world. It should be mentioned that empirical research on the impact of the introduction of the euro on trade has brought varying results, depending on the chosen research methodology, so consequently there are many conclusions about the positive, negligible and negative relationship. Obringer (2002) states that due to reduced exchange rate risk, the euro encourages lower interest rates. In the past, additional interest was charged to cover exchange rate risk. In favour of eliminating currency risk, Beattie (2021) adds that travel is facilitated by eliminating the need to exchange money (transaction costs). The third argument for the benefits of introducing the euro is price transparency. Obringer (2002) states that with cross-border price equalisation, companies have to be more competitive. Prices still vary, but consumers are able to spot a good or bad offer more easily. It is also important to mention the stability of the financial market. To a greater extent, stock exchanges can list each financial instrument in euros rather than in the denominations of each country. This has further implications in promoting trade with fewer restrictions at international level, as well as strengthening European financial markets.

According to Stiglitz (2017), the Eurozone is a project which is doomed to failure. Furthermore, the author explains that although the EU provided hope through political and economic integration, it made a fatal mistake in 1992 when it decided to unite Europe by creating a single currency, i.e. to connect member states by creating a monetary union. He explains that good monetary policy does not guarantee prosperity, and a bad one brings recessions and crises. It has been proven for numerous times throughout history that currency pegging (fixing one currency to another) is in correlation with recessions and crises. The most famous example of such practice is the gold standard where the currencies of larger countries could be converted into gold at a fixed exchange rate (Babić, 2009). With the gold standard, inflation, growth and the financial system are less stable, and when things go wrong in one part of the world, trouble will spread faster and transfer completely to others, which would actually mean that re-creating the gold standard leads to colossal mistakes.[17] Despite the historical facts, the EU has decided to be linked to one currency - a system as rigid as in the age of the gold standard.

Robert Mundell, economist, a Nobel Prize winner in the field of Economics for his paper "A Theory of Optimal Currency Areas“[18], defines the conditions needed for multiple countries to

[16] Eurozone, https://www.investopedia.com/terms/e/eurozone.asp (accessed 27 August 2021)
[17] Why a gold standard is a very bad idea, https://www.moneyandbanking.com/commentary/2016/12/14/why-a-gold-standard-is-a-very-bad-idea (accessed 11 August 2021)
[18] Robert Mundell Facts, https://www.nobelprize.org/prizes/economic-sciences/1999/mundell/facts/ (accessed 27 August 2021)

share the same currency: high labour force mobility across the region, mobility of capital and flexibility of prices and wages, currency risk sharing or fiscal mechanism for risk sharing between countries, and similar business cycles.[19] The basic premise is that countries must be similar enough to unite in a currency area, whereas the Eurozone consists of 19 member states which are too different to be functioning under the same monetary and fiscal policy. During the creation of the euro, most member states were aware of these differences and that there was no institutional framework in the community to ensure that different economies shared the same currency. Stiglitz (2017) states that the differences between countries were immense from the very beginning (where Portugal had 57% of German GDP per capita, and the later associated Latvia had 31%, compared to Germany). The European Union had hoped that the countries would get closer and more similar, but in many cases this did not happen. For example, Portugal had only 48% of Germany's GDP per capita in 2015, which means that the countries have become even more distant from each other.

The interest rate and the exchange rate are the two most important tools for maintaining full employment, and the creation of an area with a common currency takes those tools away from the state. A practical example of this could be Greece. Namely, if it had not been in the Eurozone during the crisis, its central bank could have devalued its currency. Consequently, tourists would visit Greece realizing that it was cheaper and thus increase the country's revenue, which would in turn lead to a rapid recovery of the economy. However, the European Central Bank raised interest rates in 2011, thus further "burying" Greece. Orphanides (2014) states that the Eurozone crisis was essentially a political crisis, when, in the absence of federal government, uncooperative behaviour increased the cost of the crisis and led to an unbalanced and divided occurrence of these costs. The author further explains how the European institutions were weak and incapable of defending European principles and the proper functioning of the euro.

Lang and Schadner (2021) highlight that the current situation with the Eurozone is very poor. They describe the situation in Europe as highly complicated, given that a number of urgent monetary policy measures implemented during the 2007-2012 financial and European debt crisis, such as negative interest rates and the central bank bond purchase program, are still in place. In particular, bond-buying programs were once again intensified during the Coronavirus crisis. Monetary union is in a new trilemma - supporting the free mobility of capital and stabilising monetary union are compatible only until there is no reduction, or there is a very limited reduction in expansionary monetary policy. The consequences of the COVID-19 crisis in the European area have not been resolved to date and have once again revealed various shortcomings in the construction of the euro, as national fiscal policies had not built enough tampons in the past. Therefore, the ECB's monetary policy and emergency measures are one of the main instruments of public support during the COVID-19 crisis. Following the debt crisis, Eurozone countries agreed on a banking union with a joint supervisor to sever ties between banks and their sovereigns. Addressing the trilemma requires further progress in reducing and sharing risks in the euro area, such as creating a common deposit guarantee scheme and reducing banks' exposure to domestic government bonds. Such progress may not be enough for national fiscal and monetary policies to alleviate the current COVID-19 crisis. Therefore, the introduction of a common fiscal stabilisation capacity is needed to strengthen the euro area in the event of a recession, both at state and euro area levels. Combining fiscal stabilisation capacity with a gradual reduction in asset purchase

[19] Optimal currency area, https://www.investopedia.com/terms/o/optimal-currency-area.asp (accessed 12 August 2021)

programmes could give the ECB room to break free of the trilemma described and help it emerge from the COVID-19 crisis without compromising the euro.

4.2. Introduction of the euro in the Republic of Croatia

The euro as the official currency in Croatia has been the subject of much debate. There are varying opinions on whether Croatia should adopt the euro. Joining the Eurozone may bring a number of benefits, but also a number of costs. The Croatian authorities are united in a positive response to the introduction of the euro, and Croatia is currently in the last stage of the introduction of the euro - ERM II, which it entered on 10 July 2021, and where it must spend a minimum of 2.5 years. Therefore, the introduction of the euro in the Republic of Croatia is not questionable, but it is only a question of the exact date when it will come into effect since the Republic of Croatia committed to it by joining the EU. Given the fulfilment of the Maastricht criteria so far, Croatia is expected to join the Eurozone on 1 January 2023.[20]

In 2018, the Government of the Republic of Croatia and the CNB developed a Eurostrategy in which the benefits and costs of the introduction of the euro were assessed, which is shown in Table 2.

Table 2: Eurostrategy – benefits and costs of the introduction of the euro

BENEFITS	COSTS
Elimination of the currency risk	Loss of independent monetary policy
Reduction of the risk of currency and balance of payments crises	Risk of excessive capital inflows and macroeconomic imbalances
Access to ESM	Participation in stabilisation mechanisms - ESM
Lower interest rates	One-time inflation risk upon conversion
Share in euro area emission profit	Conversion costs
Lower transaction costs	Transactions with the ECB
Positive effect on trade and investment	

Source: Šonje (2019)

From the above table, it can be discerned that the benefits are not much greater than the costs. However, it is not the quantity that matters, but the size of the impact of each segment. If the benefits are taken into account, great importance is given to currency risk, low to emission profit, and the rest is given a medium importance. In terms of costs, CNB analysts estimated that the importance of each cost item is small, except for participation in stabilisation mechanisms, which is deemed to be of medium importance.

According to Šonje (2019), there are two further arguments in favour of the benefits that he believes are not listed in the Eurostrategy. The first is the surplus of the CNB's foreign exchange reserves (according to Eurosystem rules, the CNB will continue to manage these assets, creating space for the CNB's non-monetary operations), and secondly, Croatia will have a 1/21 vote of governor on the ECB's Governing Council (almost 5%), which is six times more than the share according to the normalised capital key (about 0.8%).

It can be summarised that the Republic of Croatia meets the nominal convergence criteria, while real convergence would give an exact perception of the readiness to introduce the euro.

[20] Smjernice za prilagodbu gospodarstva u procesu zamjene hrvatske kune eurom, https://euro.hnb.hr/documents/2070751/2104255/h-smjernice-zamjena-hrvatske-kune-eurom_sijecanj-2022.pdf/41a06aed-f094-7d7e-d5e4-fbdf5c8f4584 (accessed 16 February 2022)

Given that Croatia is below the standard average compared to European countries, real convergence would better describe the country's readiness to enter such a system. This could cost much more than the CNB's analysis predicts. Admittedly, the EU has brought some benefits to the national economy, but compared to other member states, they have made multiple profit. The euro as a currency has its advantages and disadvantages. As previously mentioned in the paper, there are great differences between European countries which could present a problem for harmonious association and joint creation. Political tensions are constantly present, and the largest and economically strongest countries can set conditions that suit their economies, which are achieved at the expense of small countries.

5. Conclusion

Economic and Monetary Union project arose from the European Union's desire to bring countries in Europe closer together. The concept of EMU is based on the idea that the creation of a monetary union would unite the member states using a common currency - the euro. Today it comprises 19 members, and Croatia is in the last phase (ERM II) after which it will become the 20th member of the eurozone.

The Maastricht criteria derive from the Treaty on European Union. With its signature in 2013, the Republic of Croatia automatically accepted the introduction of the euro. The Maastricht criteria represent nominal convergence, and are achieved in four areas: price stability, public finances, exchange rates and long-term interest rates. Croatia satisfies the criterion of price stability (because inflation is within the prescribed limits), the criterion of budget deficit (except in 2020 which will not affect the decision because the extraordinary circumstances are temporary), public debt criterion is exceeded, but in line with the exception rule, Croatia has shown a clear debt reduction, except for 2020, which is again an extraordinary circumstance of a temporary nature, and the criterion of long-term interest rates (within the prescribed limits). The only criterion that is not formally met is the exchange rate criterion, which refers to the timeframe spent in ERM II phase, so the introduction of the euro is expected on 1 January 2023.

Opinions on the euro as the official currency are divided. The Eurozone has arisen out of a genuine desire to unite Europe. However, Europe is culturally and politically truly diverse, making it difficult to achieve an optimal currency area. Monetary union is a very complicated system, and although it may operate in very similar countries, in most cases it may be an inflexible system as it offers a fixed exchange rate and centralized interest rate decision-making, which is not the most appropriate option for individual economies. Croatia's economy is below the EU average, and therefore real convergence analysis would be more appropriate and would provide more important information than nominal convergence analysis.

The scientific contribution of this paper is in its systematized presentation of Maastricht criteria and its thorough analysis on the example of the Republic of Croatia. Also, it contributes to raising the general awareness of citizens about the issue of introduction of the euro and it enables understanding the possible effects that the current situation brings to the Croatian economy.

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