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Review article

## **CROATIAN PATH TOWARDS THE ERM 2: WHY, WHEN AND WHAT CAN WE LEARN FROM OUR PEERS?<sup>1</sup>**

*In this paper we analyze different aspects of Croatian path to the monetary union and its current readiness to join the ERM 2 mechanism. Firstly, we present and discuss costs and benefits of euro adoption. Second, we use descriptive analysis to determine Croatia's current position in relation to convergence criteria and discuss the possible timing of Croatian accession to the ERM 2. Thirdly, we analyze experiences of two NMS peers, Slovenia and Slovakia, before and after joining ERM 2 and highlight key lessons for Croatian policy makers. As Croatia is highly euroised (high FX risk) small and open economy, strongly integrated in EA trade and financial chains, with limited possibilities of monetary policy, the benefits of euro adoption would outweigh all commonly mentioned costs. Regarding convergence criteria, the biggest obstacle of Croatian access to ERM 2 mechanism is the level of public debt but recent developments and adjustments of SGP suggest that Croatia could satisfy the adjusted fiscal criteria already in several years. Experiences of Slovenia and Slovakia show that determined steps towards the euro (primarily ERM 2) can serve as an important policy credibility anchor and put a positive*

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*pressure on policy makers to preserve internal and external stability of the country and implement various structural reforms in order to achieve convergence with the euro zone members.*

*Key words: Croatia, euro adoption, convergence criteria, ERM 2*

## 1. Introduction

New member states (mostly CEE countries) formally committed to adoption of euro once the necessary conditions are satisfied, meaning that the euro adoption is an obligation<sup>2</sup> not only a policy choice (according to Treaty on the Functioning of the European Union). The first step in the process of euro adoption is joining the ERM 2 mechanism which represents a formal institutional framework under which non-euro zone EU member states adjust their national policies in order to prevent possible negative effects and instabilities after joining the common currency area. Participation in the ERM 2 is voluntary but as membership in this exchange rate mechanism is one of the convergence criteria for the adoption of the euro all new members states are expected to join the mechanism at some stage. The timing of the entrance to ERM 2 mechanism heavily depends on local political and economic situation but also to international environment.

Unlike most of its CEE peers who joined European Union in the accelerating phase of European business cycle and euro euphoria, Croatia joined the community after several years of European and domestic recession and shortly after the outburst of (Greece-related) euro zone crisis. These factors led to a significant deterioration of economic, fiscal and financial indicators in Croatia but also to a rise of anti-euro sentiment in the public discourse (accompanied by the rise of EU-skepticism around Europe), which removed euro adoption from the policy makers' priority agenda. However, after a prolonged recession and various local political and policy challenges, Croatian economy started to pick-up again and efforts of various governments have brought some stabilization to the fiscal sphere, thus bringing euro back on the shelf of explicit political goals.

In this paper we will discuss the reality of this important (but also obligatory) policy decision in three aspects. Firstly, as such decision requires a broad political and public consensus it is important to discuss and present all costs and benefits of the euro adoption. Thus, we will refer to all broadly accepted pros and cons in the literature and put them in the Croatian context. Secondly, there are well-known

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<sup>2</sup> New member states can't negotiate opt-out option as some "old" members did (UK or Denmark).

convergence criteria which EA candidates have to fulfill so we will use most recent data to determine Croatian current position in that context and discuss the potential timing of Croatian entrance to the ERM 2 mechanism. Finally, such important policy steps also require analysis of the experiences of some peer countries and in this paper we analyze experiences of Slovenia and Slovakia, historically, economically and structurally most comparable EA members for Croatia.

The paper is structured as follows. After the Introduction, Section 2 delivers a discussion on the costs and benefits of euro adoption and analyses them through the prism of Croatian economy. Section 3 provides a descriptive analysis of most recent economic, fiscal and financial indicators with respect to convergence criteria and discusses Croatian ERM 2 mechanism perspectives. Section 4 studies the experience of Slovenia and Slovakia before and after the ERM 2 mechanism accession which could provide a solid foundation for the construction of useful policy recommendations. Finally, Section 5 concludes.

## **2. Benefits and costs of euro adoption: Croatian perspective**

Before discussing the readiness of Croatia to join the ERM 2 mechanism and formally start the euro adoption process it is important to briefly discuss potential benefits and costs of euro adoption and analyze them from the Croatian perspective. Benefits and costs of euro adoption presented in this paper are based on discussions provided in Eudey (1998), Bilas (2005), Sturm et al (2009), Ganev (2010) and Popidera et al. (2015).

As the main benefits of euro adoption authors point out (i) reduction of transaction costs; (ii) reduction of exchange rate risk; (iii) prevention of speculative attacks; (iv) reduction of accounting costs and price transparency and (v) improving risk perception of the country (reduction in financing costs). On the other hand the biggest costs are (i) loss of monetary sovereignty and loss of the exchange rate policy as the instrument in business cycle management, (ii) direct costs of euro adoption (costs of foreign exchange conversion to euro, legal and administrative costs, loss of *seignorage*) and (iii) short term effect of euro adoption on prices.

In this paper we will focus on, in our view, most important benefits and costs from Croatian perspective. Starting with benefits we will analyze reduction of transaction costs, reduction of exchange rate risk and perception of risk (lower financing costs), while on the cost side we will analyze the effect of monetary sovereignty loss.

## 2.1. Benefits

### *Reduction of transaction costs*

This benefit reflects the transaction (exchange) costs related to the international trade on both, imports and exports, side. To assess whether euro adoption would benefit Croatia in Table 1 we present top five trading partners.

Table 1.

TOP FIVE IMPORT AND EXPORT CROATIAN  
TRADING PARTNERS IN 2016

Exports		Imports	
Italy	13%	Germany	16%
Slovenia	12%	Italy	13%
Germany	11%	Slovenia	11%
B&H	10%	Austria	9%
Austria	7%	Hungary	8%
Total EA	56%	Total EA	61%

Source: Croatian Bureau of Statistics

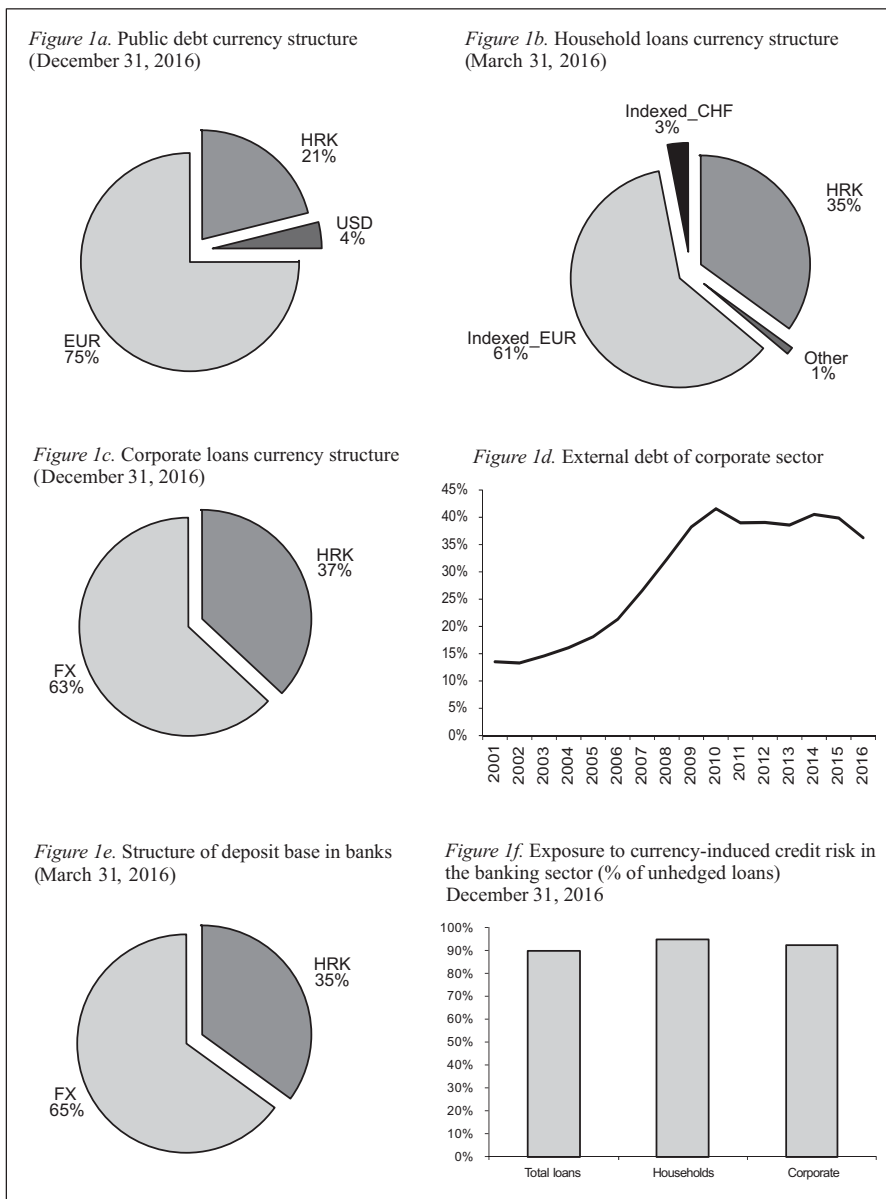
Data presented in Table 1 shows that most of top Croatian trading partners are euro zone members. Among top five export markets there are four EA members which comprise around 48% of total exports, while all EA members comprise around 56% of total exports. On the imports side there are also four EA members which comprise 49% of total imports. All euro zone members comprise around 56% of total exports and 61% of total imports. These findings suggest that euro adoption in Croatia would significantly reduce transaction costs on both sides of net exports equation.

### *Reduction of exchange rate risk*

Exchange rate risk occurs when there are currency mismatches in the balance sheets of some or all institutional sectors in the economy. Such mismatches persist when institutional sectors are indebted in FX, while their assets and income streams are in domestic currency. In this case, currency depreciation can trigger

Figure 1.

STRUCTURE OF DEBT AND EXPOSURE TO FX RISK BY INSTITUTIONAL SECTORS IN CROATIA



Note: authors use full-year figures in order to annul the effects of seasonality or one-offs on data series

Source: authors; based on Deskar-Škrbić (2017)

an upward revaluation of debt that can harm financial and economic stability. In case of Croatia such mismatches are reflected in all sectors as their liabilities are mostly denominated in EUR (high FX risk), which is presented in Figures 1a-1f.

Starting with the government sector, around 79% of public debt is denominated or linked to foreign currencies, mostly euro (75%), including Eurobonds, treasuries in EUR or FX-clause, and FX loans, while only 21% of total debt is denominated in local currency. As for the households, 64% of total loans are denominated or linked to foreign currency. Similar structure of domestic loans can be seen in the corporate sector, where 63% of total loans are denominated in FX. In addition, corporate sector has relatively large external debt, which is standing at around 40% of GDP. Moving to the banking sector, 65% of deposit base (which comprises around 87% of total non-equity liabilities) is denominated in foreign currency. Banks are also exposed to indirect credit risk (through the currency-induced credit risk) and in the Croatian banking sector 90% of loans exposed to that type of risk are not hedged against currency-induced credit risk.

All that said, given the fact that around 65-70% of debt of all institutional sectors in Croatian economy is denominated in foreign currency, mostly euro, joining the euro zone would significantly reduce FX risk and all direct and indirect costs related to hedging and FX-related uncertainties.

### *Improving risk perception of the country*

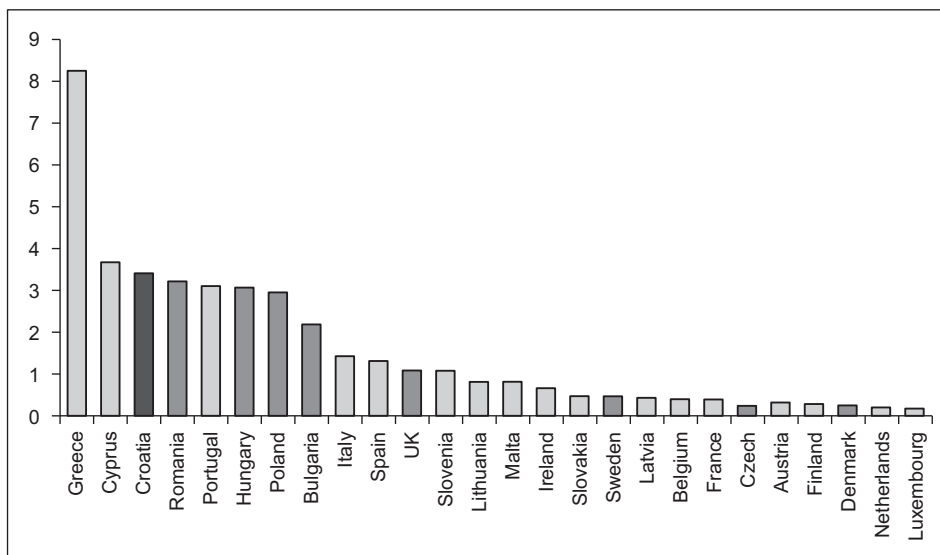
Podpiera et al. (2015) explain that introduction of euro can improve the perception of risk through the reduction of foreign exchange risk, access to lender-of-last resort facilities in a global reserve currency and for countries with weak institutions, euro adoption can also strengthen the credibility of the monetary anchor. The authors analyze the effect of euro adoption on the risk perception through the so-called “euro membership premium”. Their results indicate that, when controlled for various other economic, financial and institutional factors, through most of the 2000s, euro membership provided a substantial country risk premium (although this premium was reduced during euro crisis).

Also, convergence criteria and ERM 2 mechanism put positive pressures on policy makers to pursue prudent macroeconomic and financial policies which lead to improved internal and external imbalances. In addition, once the country becomes a euro zone member, it has to align with Stability and Growth pact and ECB regulatory framework which gives additional boost to national policy makers’ credibility. All these factors can also lead to improvement of investors’ perception.

As Croatia is one of the EU countries with the highest risk premium (Figure 2), euro adoption (*ceteris paribus*) could help to improve investors' risk perception and reduce the cost of financing through the fall in CDS spread and spreads on government securities. Also, excluding specificities of Greece and Spain, Figure 2 shows that countries which are members of the euro zone have narrower yield spreads compared to German benchmark, in line with the narrative above.

Figure 2.

LONG TERM BOND YIELD SPREAD TO GERMAN BUND



Note: Croatia is highlighted with black, while EA members are highlighted with light grey.

Source: Eurostat

2.2. Costs

*Loss of monetary sovereignty and exchange rate policies*

The biggest cost of euro adoption is that each country cedes its right to set monetary policy to respond to domestic economic problems. In addition, exchange rates between countries can no longer adjust in response to regional problems (Eudey, 1998).

However, due to various structural and institutional characteristics, monetary policy in Croatia is already fairly limited (for broader discussion see Čorić, 2011 and Čorić, Šimović and Deskar-Škrbić, 2015). Firstly, due to a high level of euroisation and implementation of 1993 stabilization program based on the exchange rate stabilization Croatian national bank (CNB) uses nominal exchange rate as a monetary policy anchor through the managed floating exchange rate regime, meaning that the main goal of price stability is obtained by preservation of exchange rate stability. Such policy framework blocks the exchange rate channel of monetary policy transmission, very important in euro adoption discussions. Secondly, as foreign banks dominate the ownership structure of the banking sector (89%) and six foreign-owned banks comprise around 80% of total assets of the banking sector CNB does not play a full role of the lender of last resort because most of the banks (especially systemically-important ones) have access to favorable financing at their foreign mother banks. Thirdly, interest rate channel of monetary policy transmission is also limited as CNB can't implement a strong expansionary policy to reduce money market rates (depreciation pressures) and there is no key (benchmark) rate in the banking system. Finally, as CNB implements managed floating exchange rate regime (or crawling peg, IMF, 2014) and as a part of the EU Croatia has a high degree of capital mobility, in accordance to "impossible trinity" theory its monetary policy sovereignty is automatically limited (impossible).

*Table 2.*

SOME CHARACTERISTICS OF MONETARY POLICY IN CROATIA  
IMPORTANT FOR EURO DISCUSSION

Instruments/ characteristics	Monetary policy sovereignty	Explanation
Interest rate channel	Limited	Limited by exchange rate anchor; no key rate
Exchange rate channel	Limited	Limited by exchange rate anchor
Lender of last resort	Limited	Domination of foreign banks (liquidity window at mother banks)
Autonomous monetary policy	Limited	Managed exchange rate and capital mobility (impossible trinity)

Source: authors

Based on these facts we can conclude that the loss of monetary policy instruments which are most commonly mentioned in the literature would not present a notable cost for the monetary policy sovereignty in Croatia.



To sum up, this brief cost-benefit analysis indicates that euro adoption would bring significant benefits to Croatia in terms of reduction of transaction costs, reduction of FX risk (probably most important benefit) and potential reduction of risk premium, while the loss of monetary sovereignty (which is the most notable cost) would not be pronounced in Croatia as its monetary policy is already significantly limited.

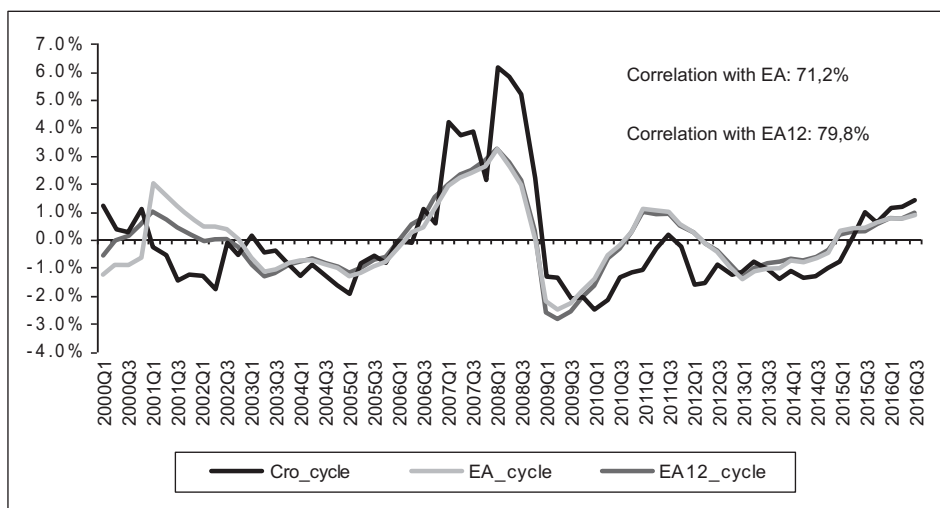
### 2.3. Is Croatian business cycle synchronized with the euro zone?

In the discussion above we mostly focused on the immediate effects of euro adoption but there are also some potential long term benefits for the countries which join the euro area, mainly gains from increased trade and international capital flows. However, these benefits only hold if the business cycle of the national economy is strongly synchronized with euro area business cycle (McKinnon, 2004; Ganey, 2010; Dees and Zoreel, 2011).

Thus, to take a brief look on the level of synchronization of business cycle in Croatia and euro area we use a standard approach, based on the Hodrick-Prescott filtering of real GDP series. Figure 3 shows cyclical component of real GDP expressed in percentage deviations of long term trend.

Figure 3.

#### BUSINESS CYCLE SYNCHRONIZATION: HP FILTER CYCLE



Source: authors

Dynamics of the cycles and calculated coefficients of linear correlation indicate that there is a high degree of synchronization of Croatian business cycle and business cycles of whole euro area and EA12. This indicates that euro zone membership could lead to additional intensification of trade and financial flows, which could bring some long term “euro gains” for Croatian economy.

### **3. Is Croatia ready for ERM 2 mechanism? Convergence criteria analysis<sup>3</sup>**

In this part of the paper we first briefly present the process of joining the ERM 2 mechanism as a decisive step to the euro adoption. Then, we turn to the analysis of the Croatia’s current position regarding Maastricht criteria, important precondition for both, joining ERM 2 and euro adoption.

#### ***3.1. Joining ERM 2 – procedural framework***

The precise mechanism of member state candidate countries’ integration to the euro zone is laid out in the Maastricht Treaty and it includes three phases (Čorić and Mesić, 2012).

First, pre-accession phase refers to the period prior to entry into the European Union. At this stage, a future member needs to adapt its legislative framework to Community legislation. The statute of the central bank should be adjusted with the aim of abolishing the legal possibilities of lending to the government by the central bank and the full liberalization of capital flows. At this stage the countries are expected to start to harmonize economic policies to the Maastricht criteria, as well as focusing on the Copenhagen criteria.

The second phase relates to the membership in the EU with the delayed introduction of the euro. It is the period between the accession to the EU and the introduction of the euro, which is split into two sub-phases. The first sub-phase includes preparation for entry into the ERM 2 mechanism, which includes four steps.

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<sup>3</sup> This section is partially based on Deskar-Škrbić (2017)

Table 3.

PROCEDURAL STEPS TO ALLOW PARTICIPATION IN ERM 2

Phases		Short description
Step 1	Exchange-rate Procedure	Initiated by a confidential joint request from a minister and a central bank governor from a country requesting entry into ERM II, addressed to the Ecofin minister of the country holding the EU Presidency and President and the Secretary of the EFC. Meeting the ERM II Committee, discussing central rate and fluctuation band.
Step 2	ERM 2 Committee	The meeting is a kind of “pre-screening” of the countries applying to introduce the euro. The Committee discusses and determines whether the macroeconomic framework of the ERM II applicant country is consistent with ERM II entry, notably in connection with the Broad Economic Policy Guidelines and the Stability and Growth Pact.
Step 3	ERM 2 Exchange-rate Meeting	Final adoption of the central rate and fluctuation band.
Step 4	The final communiqué	Includes the decision on the joining the euro zone, the central rate, the fluctuation band, the announcement on the economic policy of the Member State and a statement on the discussion of intervention points between the ECB and the national central bank.

Source: Čorić and Mesić, 2012, Czech National Bank (2003)

The time schedule for the whole process is not fixed but depends on the degree of agreement reached between the national authorities and the bodies of the EU. Although not explicitly stated, we can presume that the most important step in this procedure is Step 2 where ERM 2 Committee discusses the macroeconomic framework of the candidate country and its consistency with ERM 2 entry, which is mostly based on the discussion on the country’s current position regarding convergence criteria (see below).

The second sub-phase refers to the period between joining the ERM 2 mechanism and the introduction of euro. It is a time when policy makers in candidate countries are taking all possible steps in order to fulfill the Maastricht criteria and ensure economic convergence of the country.

Finally, the introduction of euro is the third and final phase in the process of integration of candidate countries to the euro area, which follows after the European Commission assesses a stay of the country in the ERM 2 as a success.

At this moment Croatia is in the second phase of integration to the euro zone, i.e. in the phase after joining EU and before entering the ERM 2 mechanism, and currently there is no clear or explicit timeframe for initiation of the first step of ERM 2 adopted in government's strategic documents.

As discussed above, the first step for entering the mechanism (initiation of Exchange rate procedure) is voluntarily and the timing depends exclusively on the decision of acceding country's policy makers, which is heavily dependent on the judgement that the country satisfies all other convergence criteria and that the time spent in ERM 2 mechanism will be minimal, i.e. two years as acceding countries perceive this mechanism only as a "waiting room" before the euro adoption and thus try to minimize the time spent in ERM 2 (Backe and Thimann, 2004).

To illustrate this view we refer to the position of the government of Czech Republic before joining the EU: "The participation in ERM 2 can be perceived only as a prerequisite for joining the euro zone and the central bank does not consider a longer-than-necessary stay in ERM 2 to be desirable. In line with this view the Czech Republic should enter the ERM 2 only after conditions have been created that will enable it to introduce the euro at the time of the assessment of the exchange-rate criterion (two years after joining the ERM 2). In view of the development of the general government deficit expected within the framework of proposed public finance reform, the koruna would therefore remain outside [the] ERM 2 system, even for some time after the accession of the Czech Republic to the EU" (PEP 2003).

On the other hand, during the decision-making process acceding country's policy makers should also have in mind the ECB's view on the desirability of the "application" to the ERM 2 mechanism. Most of the statements from ECB officials suggest that the timing of the application is determined by acceding country's degree of (economic and institutional) convergence with the euro zone. In Table 4 we present some of the statements which reflect ECB's view on the potential timing of joining the ERM 2 mechanism.

Thus, it is clear that the implementation of the Maastricht criteria is crucial for application to ERM 2 and the successful completion of the process of integration to the euro zone. Thus in the next section we briefly discuss the Maastricht criteria and analyze Croatian current position regarding all of the convergence criteria.

Table 4.

ECB’S VIEW ON THE DESIRABLE TIMING OF APPLICATION TO ERM 2

Official	Statement
L. Papdemos (2003)	“Achieving a high degree of <b>nominal convergence and a significant degree of ‘institutional’ convergence</b> is essential for, first, smooth participation in the Exchange Rate Mechanism (ERM 2) and, later on, successful membership in the euro area.”
O. Issing (2003)	“It is important that any decision to join ERM 2 is <b>consistent with an adequate level of nominal and real convergence with the euro area</b> ... Once in ERM 2, countries will be expected to continue their convergence process until the <b>sustainable achievement of the Maastricht criteria</b> “
G. Tumpell-Gugereel (2003)	„Participation in ERM II may contribute to anchor expectations and support the <b>implementation of sound macroeconomic and structural policies</b> , thus fostering real and nominal convergence.“

Source: Backe and Thimann, 2004

**3.2. Convergence criteria – what does Croatian data say?**

The euro convergence criteria are the criteria which EU member states have to fulfill to adopt the euro as their currency (ECB), based on the on Article 140 of the Treaty on the Functioning of the European Union. They include economic and “legal” convergence criteria. These criteria are defined in Table 5.

Table 5.

## CONVERGENCE CRITERIA

Criteria	Reference value	Short description
<b>Economic convergence</b>		
<b>Price developments</b>	Max +1.50% above the three best performing MS in terms of price stability	“the achievement of a high degree of price stability; this will be apparent from a rate of inflation which is close to that of, at most, the three best performing Member States in terms of price stability”
<b>Fiscal developments</b>	EDP procedure: None	“the sustainability of the government financial position; this will be apparent from having achieved a government budgetary position without a deficit that is excessive as determined in accordance with Article 126(6)”*
	Deficit criterion (3% of GDP)	
	Debt criterion (60% of GDP)	“not the subject of a Council decision under Article 126(6) of the said Treaty that an excessive deficit exists”.
<b>Exchange rate developments</b>	ERM 2 (+/-15%)	The criterion on participation in the ERM of the EMS “a Member State has respected the normal fluctuation margins provided for by the exchange-rate mechanism on the EMS without severe tensions for at least the last two years before the examination“ (no devaluation against euro)
<b>Long term interest rate developments</b>	Max +2% above the three best performing MS in terms of price stability	“the durability of convergence achieved by the Member State with a derogation and of its participation in the exchange-rate mechanism being reflected in the long-term interest-rate levels”
<b>Legal convergence - compatibility of national legislations with the Treaty</b>		
The aim of assessing legal convergence is to facilitate the Council’s decisions as to which Member States fulfil ‘their obligations regarding the achievement of economic and monetary union’. In the legal domain, such conditions refer in particular to central bank independence and to the national banks’ legal integration into the euro zone		

Source: (ECB, 2016); \* Article 126(6) – related to excessive deficit procedure

The aim of convergence criteria is to support nominal and real economic, as well as institutional, convergence of non-euro area member states with euro zone

members. Detailed analysis of the convergence criteria undoubtedly indicates their anti-inflation character, which can be seen in inflation, exchange rate and fiscal criteria. In addition, the apparent aim of establishing criteria is to ensure macroeconomic balance in accession countries during the second phase and before entering the euro area, so that the enlargement would not in any way threaten the stability of the monetary union (Čorić and Mesić, 2012).

Compliance with the convergence criteria is assessed in Convergence Reports which are published at least once every two years or at the request of an EU member states which would like to join the euro area. Both the ECB and the European Commission issue these reports describing the progress made by non-euro area member towards achieving the criteria necessary for a country to adopt the euro. The last convergence report was published in June 2016 (European Commission, 2016) and we will use the findings of this report to determine Croatian position related to convergence criteria but also to compare Croatia to other non-euro area member states.

Conclusions of the latest Convergence report are briefly summarized in Table 6.

Table 6.

FINDINGS OF THE JUNE 2016 CONVERGENCE REPORT

Country	HICP inflation rate	Excessive deficit procedure		Exchange rate	Long-term interest rate	Compatibility of legislation	
		None/open		ERM II member	Change in rate		
Reference values	Max. 0.7%	Budget deficit to GDP (3% of GDP)	Debt-to-GDP ratio (60% of GDP)	Min. 2 years	Max. ±15%	Max. 4.0%	Yes
Bulgaria	-1.00%	EDP: None 2.10% 26.70%		No	0.00%	2.50%	No
Croatia	-0.40%	EDP: Open 3.20% 86.70%		No	0.30%	3.70%	Yes
Czech Republic	0.40%	EDP: None 0.40% 41.10%		No	0.90%	0.60%	No
Hungary	0.40%	EDP: None 2.00% 75.30%		No	-0.40%	3.40%	No
Poland	-0.50%	EDP: None 2.60% 51.30%		No	0.00%	2.90%	No
Romania	-1.30%	EDP: None 0.70% 38.40%		No	0.00%	3.60%	No
Sweden	0.90%	EDP: None 0.00% 43.40%		No	-2.80%	0.80%	No

Note: Light grey highlight indicates that criterion is not fulfilled.

Source: authors based on European Commission (2016)

Based on these findings we can conclude that Croatia did not fulfill fiscal criteria and ERM 2 membership criteria yet, while inflation and interest rate criteria, as well as legal convergence criterion were met. In comparison to other peers Croatia could be seen as a worst performer in the latest convergence report. However, data included in this report refer to the fiscal year 2015 so it could be useful to simulate Croatian compliance with convergence criteria and reference values based on the most recent data. This “exercise” is presented in Table 7.

Table 7.

**CROATIAN COMPLIANCE WITH CONVERGENCE CRITERIA  
– MOST RECENT DATA (2016)**

Country	HICP inflation rate	Excessive deficit procedure		Exchange rate		Long term interest rate	Compatibility of legislation
		None/Open		ERM II member	Change in rate		
Reference values	Max 1% <sup>(1)</sup>	Budget deficit to GDP (3% of GDP)	Debt-to-GDP ratio (60% of GDP)	Min 2 years	Max 15%	Max 3.8%	Yes
Croatia	-0.60%	EDP: None <sup>(2)</sup>		No	0.50% <sup>(4)</sup>	3.50% <sup>(5)</sup>	Yes
		0.80%	83.70% <sup>(3b)</sup>				

Note on reference values calculation:

(1) In calculating this reference value we use 2016 HICP for Spain, Slovakia and Croatia (we excluded Romania, Bulgaria and Cyprus as outliers, following European Commission (2016))

(2) EDP for Croatia was abolished in June 2017

(3) Percentage change in average EUR/HRK rate from 2014-2016

(4) Average long term interest rates (EMU convergence) for Spain, Slovakia and Croatia in 2016

Source: authors

Table 7 shows that fiscal position in Croatia in 2016 improved significantly, as fiscal deficit fell below 1% of GDP while public debt recorded a first annual decrease (in pp of GDP) after 2008. Such improved fiscal developments, accompanied by more favorable economic outlook (GDP growth figure in 2016 of 3% y/y), prompted the European Commission to end the excessive deficit procedure (EDP) for Croatia in June 2017. Thus, Croatian position in relation to convergence



criteria is more favorable as there are “only” two unfulfilled criteria: public debt and ERM 2 membership.

Regarding Croatian public debt, although the ratio is significantly above the Maastricht benchmark, it should be noted that after the revision of Stability and Growth Pact in 2011 public debt criterion became somewhat more flexible (ECB, 2016). Introduction of the debt reduction benchmark allows the country to fulfill this criterion despite the excess above of 60% of GDP if the “the ratio is sufficiently diminishing and approaching the reference value at a satisfactory pace“.

More precisely, the ratio of the government debt to GDP is considered sufficiently diminishing and approaching the reference value at a satisfactory pace if the differential with respect to the reference value has decreased over the previous three years at an average rate of one twentieth per year as a benchmark, based on changes over the last three years for which the data are available (European Commission, 2016).

Introduction of this “debt reduction benchmark” should be encouraging for Croatian policy makers as it indicates that Croatia can apply for accession to ERM 2 mechanism before reaching a 60% of GDP benchmark and relatively soon, provided that the policy makers continue to pursue a prudent fiscal policy in the medium run.

Having all this in mind we can now discuss the potential hypothetical date of the Croatian initiation of the first step of ERM 2 procedure. As a background for our “baseline scenario” in this discussion we use data and conclusions provided in Table 7 and economic and fiscal projections presented in recently adopted Strategy of public debt management (Ministry of finance, 2017) – Table 8 and Figure 4.

Table 8.

MACROECONOMIC PROJECTIONS 2017-2019

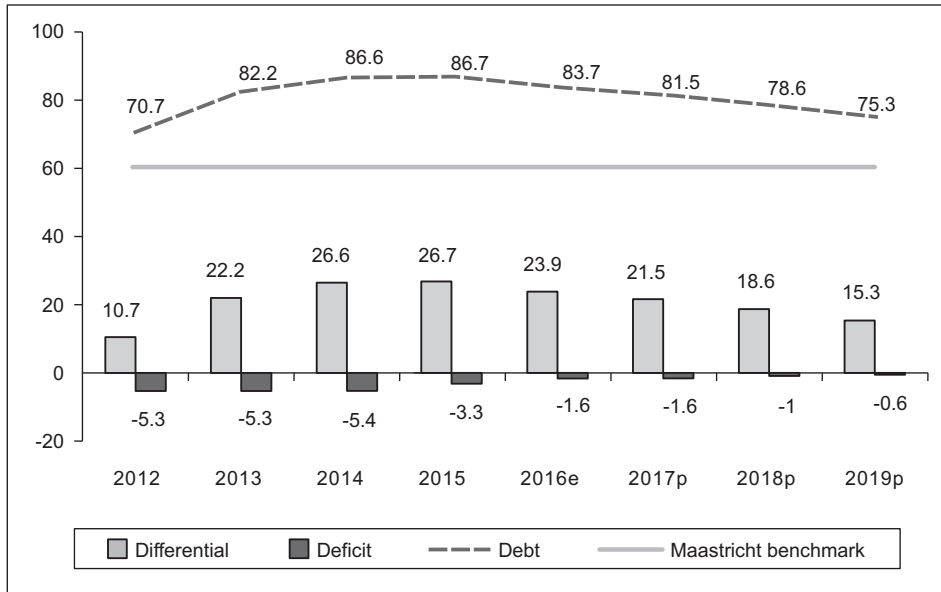
	2017	2018	2019
<b>Real GDP growth (y/y)</b>	3.2%	3.2%	3.3%
<b>Consumer price index (y/y)</b>	1.0%	1.5%	1.7%
<b>General government deficit (% of GDP)</b>	-1.6%	-1.0%	-0.6%
<b>Public debt (% of GDP)</b>	81.5%	78.6%	75.3%

Note: Exchange rate is expected to remain stable under the exchange rate anchor

Source: Ministry of finance (2017)

Figure 4.

## CROATIAN FISCAL PROJECTIONS 2017-2019 (% OF GDP)



Source: authors based on Ministry of finance (2017)

In this baseline scenario Croatia could initiate the first step of ERM 2 procedure in 2020, as in 2017-2019 period public debt trajectory could satisfy a debt reduction benchmark. Hypothetically, if Croatia would apply the similar strategy as other CEE peers and make a substantial effort to stay in ERM 2 for (minimum) 2 years, the euro adoption in 2022/3 doesn't seem so inconceivable. However, realization of this scenario requires a continuation of prudent fiscal policy aimed at deficit reduction, accompanied by the reforms in other spheres of the economy which should increase Croatian potential growth rate (approximated at around 3% y/y). Also, as noted in the introduction, policy makers' initiation of the ERM 2 mechanism is heavily dependent on broad political and public consensus so policy makers would have to present all benefits and costs to the expert and broad public, in a concrete and comprehensible way.

#### 4. What can we learn from our peers? Case of Slovenia and Slovakia

In this part of the paper we will briefly analyze the experiences of two CEE peers, namely Slovenia and Slovakia, in the accession phase and in the ERM 2 mechanism to draw some policy lessons for Croatia. These countries are included in the analysis because their characteristics (small open economies, size, socio-historical factors) make them most comparable to Croatia among all other euro area countries.

When analyzing the statements of Slovenian and Slovakian officials, even before the EU membership, we could say that fiscal and monetary authorities in these countries recognized potential benefits of ERM 2 as they advocated a fast initiation of ERM 2 mechanism procedure and minimal stay in the mechanism. Some views of these' countries officials are presented in Table 9.

Table 9.

#### THE VIEWS OF SLOVENIAN AND SLOVAKIAN OFFICIALS ON THE ERM 2

Country/ Document	Statement
<b>Slovenia/ PEP 2003</b>	“Slovenia intends to enter into the ERM II in the first half of 2005.” PEP 2003. Subsequently, in November 2003, the Slovenian government and the central bank agreed on a joint monetary integration strategy according to which Slovenia would intend to join ERM II “by the end of 2004”
<b>Slovakia/ Strategy of the Slovak Republic for Adoption of the Euro (2003)</b>	“The time spent inside the ERM II should be as short as possible ... the country could join the ERM II in 2005.”

Source: Čorić and Mesić, 2012

Also, according to Podpiera et al. (2015), governments of these countries recognized ERM 2 and euro adoption as an important stability and credibility anchor. For example, in 2003 the Slovenian authorities listed as the first benefit of euro introduction “providing a more stable environment for the whole economy” and in the same year the Slovakian central bank wrote that “the adoption of the single currency will represent the completion of the integration process”.

#### *4.1. Pre-ERM 2 accession period in Slovenia and Slovakia*

One of the most important policy choices of ERM 2 acceding countries is the exchange rate regime. Although it seems logical for countries to implement a fixed exchange rate regime before the application to ERM 2, experiences of CEE region show that countries have chosen and pursued various exchange rate regimes (for details see Nerlich, 2002).

As for Slovenia and Slovakia, according to Čorić (2011) Slovenia implemented floating exchange rate regime in the whole period from 1990-2004 while in the same period Slovakia followed and changed three exchange rate regimes fixed, intermediate and floating.

More detailed view on the Slovenian foreign exchange rate strategy points to the difference between the nominal (*de jure*) and actual (*de facto*) exchange rate framework. Despite the fact that during the entire period the Bank of Slovenia nominally applied the regime of managed floating exchange rate, Capriolo and Lavrač (2003) assess 1992 - 1995 as a period of free fall of the exchange rate without a significant impact of monetary authorities on these movements. A key feature of Slovenian monetary policy in this period was the stabilization strategy through informal targeting of monetary aggregate M1. Then, the whole period from 1996 to 2004 is classified under the crawling exchange rate regime. However, from 1996-2001 monetary policy was based on the two anchors, monetary aggregate (M3) and exchange rate, while in 2001 the goal of stable inflation was anchored solely through the exchange rate.

Slovak national bank changed its exchange rate strategy several times (Čorić, 2011). The beginning of the implementation of an independent exchange rate policy in Slovakia was characterized by a 10 percent devaluation of the crown in mid-1993. In the stabilization phase Slovak central bank used the exchange rate policy as a tool to fight inflation, implementing the strategy of the exchange rate anchor against a basket of five currencies (+/- 1.5%). In mid-1994 there was a reduction in the basket to two currencies, the German mark (60%) and US dollar (40%). The first modification of the exchange rate regime was conducted in 1996, when the range of fluctuation was expanded from 1.5% to 7%, which meant a shift from a fixed exchange rate to an intermediate form. In October 1998, the Slovak central bank has further liberalized the exchange rate policy and introduced a regime of managed floating exchange rate which remained in force until the entry into the ERM 2.

Backe and Thimann (2004) confirm these views and define the exchange rate regime in Slovenia and Slovakia in 2004, the year of EU accession - Table 10.

*Table 10.*

**EXCHANGE RATE STRATEGIES FOLLOWED  
 BY SLOVENIA AND SLOVAKIA IN 2004**

<b>Country</b>	<b>Exchange rate regime</b>	<b>Currency</b>	<b>Short description</b>
<b>Slovenia</b>	Exchange rates within crawling bands (de facto) Managed float (de iure)	Slovenian tolar	Two-pillar strategy monitoring monetary, real, external and financial indicators
<b>Slovakia</b>	Managed float	Slovak koruna	Hybrid strategy, combined with implicit inflation targeting

Source: authors based on Backe and Thimann (2004)

Regardless the exchange rate strategies used in the longer run, in years before the accession to the EU and application to ERM 2 mechanism, both countries adopted a de facto and/or de iure managed float exchange rate regime. In that sense, Croatian exchange rate strategy is currently aligned with strategies chosen by Slovenian and Slovakian central banks in early 2000s.

***4.2. Effects of ERM 2 on convergence indicators in Slovenia and Slovakia***

As policy makers in these countries were inclined towards a fast introduction of euro they initiated ERM 2 soon after the EU accession. Slovenia formally initiated ERM 2 procedural steps already in June 2004 and Slovakia in November 2005. In Table 11 we present main convergence indicators for these countries in the year and year before the joining the ERM 2 mechanism. These indicators are based on data presented in the Convergence Report for 2004, as the next report was published only in 2006, after both countries were already in the ERM 2 mechanism.

Table 11.

CONVERGENCE CRITERIA IN SLOVENIA AND SLOVAKIA  
IN THE YEAR OF JOINING ERM 2

Country	HICP inflation rate	Fiscal position		Exchange rate		Long term interest rate	Compatibility of legislation
				ERM II member	Change in rate		
<b>Reference values</b>	<b>Max 2.4%</b>	<b>Budget deficit to GDP (3% of GDP)</b>	<b>Debt-to-GDP ratio (60% of GDP)</b>	<b>Min 2 years</b>	<b>Max 15%</b>	<b>Max 6.4%</b>	<b>Yes</b>
Slovenia	4.1%	2.0%	29.4%	No	0.3%	5.2%	Yes
Slovakia	8.4%	3.7%	42.6%	No	2.4%	5.1%	Yes

Source: European Central Bank (2004)

We can conclude that these countries did not fulfill all of convergence criteria during the period of initiating the ERM 2. As this period was marked by accelerating EU and EA business cycle phase it was rather inflationary so both countries did not fulfill inflation criterion. In addition, Slovakia had a deficit above the Maastricht 3% of GDP benchmark.

Thus, one of the policy lessons is that it is not necessary to fulfill all of the Maastricht criteria in order to get a positive review in the step two of ERM 2 procedure. But deviations of the member states' indicators should not be excessive and idiosyncratic (e.g. higher inflation indicator in case of Slovenia and Slovakia was probably tolerated due to a systemic inflationary phase in Europe; if that was a specificity of one of the countries it is possible that ERM 2 committee would be less benevolent).

Table 12 suggests that ERM 2 mechanism can be seen as a credibility and stability anchor. In the year of euro adoption, for Slovenia 2007 and for Slovakia 2008, all convergence indicators improved.

Table 12.

CONVERGENCE INDICATORS IN SLOVENIA AND SLOVAKIA  
 IN THE YEAR OF EURO ADOPTION

Country	HICP inflation rate	Budget deficit to GDP (3% of GDP)	Debt-to-GDP ratio (60% of GDP)	Long term interest rate
Slovenia (2007)	3.8%	-0.1%	22.8%	4.5%
Slovakia (2008)	3.9%	-2.4%	28.5%	4.7%

Source: Eurostat

Besides the effects on convergence indicators, following Čorić (2011) in this part of the paper we analyze the effects of ERM 2 mechanism on economic indicators to assess whether ERM 2 mechanism helped Slovenia and Slovakia to achieve a “real” convergence. We focus on five economic indicators: (i) real GDP growth rate, (ii) GDP per capita as % of EA GDP per capita; (iii) unemployment rate; (iv) external debt and (v) trade balance. In addition, we also analyze the effect on one socio-economic indicator, life expectancy as a % of life expectancy in the euro zone.

These indicators are observed in a five-year period, which covers two years prior to joining the ERM 2  $\{(T-2) \text{ and } (T-1)\}$ , the year of the entry (T) and two years spent in the exchange rate mechanism ERM 2  $\{(T + 1) \text{ and } (T + 2)\}$ . Time (T) for Slovenia is 2004 and for Slovakia 2006 as Slovakia joined ERM 2 at the end of 2005 so effectively 2006 is the first year of its stay in the mechanism. Data are presented in Table 13.

The effect of the ERM 2 mechanism on the GDP real growth rate and GDP per capita can be deemed positive as these indicators increased in both countries. Effect on unemployment rate was also favorable, especially in Slovakia where unemployment rate almost halved in the analyzed five-year period. However, part of this improvement has to be attributed also to the strong economic conjuncture in this period, which represents a peak of the 2000s European economic and financial cycle. As for external balance indicators, the conclusions are bit more blurry. Average accumulation of external debt remained relatively flat in two years before and two years in the ERM 2 mechanism. Trade balance in the balance of payments slightly deteriorated in case of Slovenia, where trade balance surplus slipped into the negative territory, while Slovakian trade deficit stabilized and mildly compressed as average deficit in two years in the ERM 2 regime was lower than in the years before. Socio-economic indicator of life expectancy is also somewhat am-

biguous as Slovenian position slightly improved, while Slovakian position slightly deteriorated.

To sum up the main conclusions of this section, ERM 2 mechanism had a positive effect on Slovenian and Slovakian convergence indicators. The economic effects of ERM 2 mechanism can also be assessed as broadly positive, where acceleration of GDP growth, increase of living standard and fall in unemployment rate can be seen as the main economic benefits of ERM 2 mechanism.

Table 13.

ECONOMIC AND SOCIOECONOMIC INDICATORS FOR SLOVENIA AND SLOVAKIA IN PRE-ERM 2 AND UNDER ERM 2 PERIOD

	Country	ERM (T-2)	ERM (T-1)	ERM (T)	ERM (T+1)	ERM (T+2)	Effect
Real GDP growth (y/y in %)	Slovenia	4.0%	2.8%	4.3%	4.5%	4.8%	+
	Slovakia	5.0%	6.7%	8.5%	10.6%	6.2%	+
GDP per capita (% of GDP per capita in EA)	Slovenia	52.2%	53.6%	55.0%	56.6%	58.4%	+
	Slovakia	30.6%	32.2%	34.1%	36.9%	39.1%	+
Unemployment rate (%)	Slovenia	6.3%	6.7%	6.3%	6.5%	6.0%	+
	Slovakia	18.2%	16.3%	13.4%	11.1%	9.5%	+
External debt (y/y in %)	Slovenia	n/a	40.0%	25.1%	15.8%	30.8%	+/-
	Slovakia	31.4%	13.8%	19.1%	37.6%	18.6%	+/-
BoP trade balance (% of GDP)	Slovenia	1.2%	-0.2%	-1.3%	-0.4%	-0.5%	-
	Slovakia	-2.7%	-4.6%	-4.0%	-1.1%	-2.3%	+
Life expectancy (% of life expectancy in EA)	Slovenia	97.1%	n/a	n/a	96.0%	97.3%	+
	Slovakia	n/a	92.9%	92.6%	92.5%	92.7%	-

Source: authors based on Ćorić (2011)

## 5. Conclusions

As a small and open economy, highly integrated in the European trade and financial chains, with high level of eurisation and limited monetary policy Croatia could have significant benefits from euro adoption, which would outweigh all of the



commonly mentioned costs. The biggest benefit would be a reduction of FX risk as all institutional sectors in Croatia (households, corporate sector, financial institutions and government) are directly and indirectly heavily exposed to this risk. In addition, as Croatia is one of the EU countries with the highest risk premium, euro adoption could lead to improved investors' perception, which would reduce risk premium and, consequently, financing costs for both, private and public sector.

Experience of CEE peers presented in this paper shows that ERM 2 mechanism can serve as an important policy credibility anchor and motivate policy makers to pursue prudent policies in order to shorten the stay in the ERM 2 mechanism (aiming for minimal 2 years) and introduce the euro as soon as possible. In addition, analyzed convergence and economic indicators show that ERM 2 had generally positive effects on Slovenian and Slovakian fiscal balances, growth trajectory and unemployment rates.

To conclude, although prolonged recession, deteriorated fiscal position and the rise of anti-euro rhetoric in recent years made euro adoption to seem as an unattainable goal for Croatia in this paper we showed that if policy makers use improved growth momentum and stabilization of public finances recorded in 2016 and continue to pursue prudent fiscal and economic policies, there is no objective obstacle to initiate the first step of ERM 2 mechanism procedure by 2020. In this, currently relatively realistic macro scenario, Croatia could adopt euro till 2023. However, such important policy decision requires a broad political and public consensus so it is important for policy makers to comprehensively present all the benefits and costs associated with euro adoption and open a broad expert and public discussion as soon as possible.

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## HRVATSKI PUT PREMA ERM 2: ZAŠTO, KAKO I ŠTO MOŽEMO NAUČITI OD DRUGIH ZEMALJA?

### Sažetak

U ovom radu autori analiziraju različite aspekte pristupanja Hrvatske europodručju i ocjenjuju trenutačnu spremnost Hrvatske za ulazak u tečajni mehanizam ERM 2. Prvo, u radu se sažeto prikazuju potencijalni troškovi i koristi od uvođenja eura kao nacionalne valute. Drugo, koristeći metodu deskriptivne statistike, autori utvrđuju trenutačnu poziciju Hrvatske u odnosu na konvergencijske kriterije te određuju potencijalni (realističan) trenutak ulaska u tečajni mehanizam ERM 2. Treće, autori analiziraju iskustva usporedivih zemalja članica Nove Europe, Slovenije i Slovačke, prije i nakon ulaska u ERM 2 te ističu ključne pouke za nositelje politike u Hrvatskoj. Budući da je Hrvatska visoko euroizirana, mala, otvorena ekonomija, snažno integrirana u trgovinske i financijske tokove europodručja te da već ima ograničen suverenitet monetarne politike, u radu se zaključuje kako potencijalne prednosti uvođenja eura nadmašuju sve potencijalne troškove. Što se tiče konvergencijskih kriterija, najveća prepreka ulasku u ERM 2 predstavlja visoka razina javnog duga, ali nedavne izmjene Pakta o stabilnosti i rastu te uvođenje novog kriterija duga omogućavaju Hrvatskoj da zadovolji i novi kriterij duga u sljedećih nekoliko godina. Iskustva Slovenije i Slovačke pokazuju da odlučan put prema euru (prvenstveno boravak u ERM 2) može poslužiti kao važno sidro kredibiliteta ekonomske politike i potaknuti nositelje politike da očuvaju internu i eksternu stabilnost zemlje te implementiraju različite strukturne reforme kako bi ostvarili što veći stupanj konvergenije prema zemljama euro područja.

Ključne riječi: Hrvatska, euro, konvergencijski kriteriji, ERM 2