

# Choice of Exchange Rate Regimes: Case of Ex-Yugoslavia Countries

Ivan Lovrinović, Gordana Kordić, Martina Nakić

*In international monetary economics our exam questions remain the same.  
Only the answers change, from decade to decade*  
Jeffrey A. Frankel

**Abstract**—There are little subjects in macroeconomics that are so widely discussed, but at the same time controversial and without a clear solution such as the choice of exchange rate regime. National authorities need to take into consideration numerous fundamentals, trying to fulfil goals of economic growth, low and stable inflation and international stability. This paper focuses on the countries of ex-Yugoslavia and their exchange rate history as independent states. We follow the development of the regimes in 6 countries during the transition through the financial crisis of the second part of the 2000s to the prospects of their final goal: full membership in the European Union. Main question is to what extent has the exchange regime contributed to their economic success, considering other objective factors.

**Keywords**—European Union, exchange rate regime, ex-Yugoslavia countries

## I. INTRODUCTION

**D**ETERMINATION of exchange rate regime has widely been discussed in the past few decades, especially after abandoning the Bretton Woods system based on the fixed exchange rate. But, the new and powerful macroeconomic tool opened a number of questions. As it is shown in the Frankel's words above, the questions remain the same, while the answers change, as the fundamentals change. Despite the numerous discussions, there was a little consensus on the subject, especially in terms of dynamic changes on the international market.

The paper discusses the factors of exchange rate choice, their classification and main trends in the past few decades. The usual classification includes basically three groups of regimes: fixed and flexible on the two corner sides of the system and the intermediate regimes, a combination of these two. At one point, it seemed the latter will disappear and the countries will choose only between the corner solutions, but these days intermediate regimes seem quite stable. Another important theme discussed is the distinction between officially claimed and regime used in practice; the so called "fear of floating".

Ivan Lovrinović, Ph. D. is with the Faculty of Economics and Business, University of Zagreb, Zagreb, 10 000 HR (phone: 003851-238-3128; fax: 003851-233-5633; e-mail: ilovrinovic@efzg.hr).

Gordana Kordić, Ph. D. is with the Faculty of Economics and Business, University of Zagreb, Zagreb, 10 000 HR (e-mail: gkordic@efzg.hr).

Martina Nakić, B. A. is with the Faculty of Economics and Business, University of Zagreb, Zagreb, 10 000 HR (e-mail: mnakic@efzg.hr).

The focus of the paper is on the transition countries that used to be parts of ex-Yugoslavia. Apart from the transition process from centrally planning to the market economies, with problems arising from the undeveloped market, weak institutions and the lack of credibility and experience of the monetary policy authorities, this region also went through turbulent political period that caused wide range of (war) damages. These countries had common history but also have a common future goal – full membership into European Union and adoption of euro. Two decades after the beginning of the independence the situation is not unified. Out of 6 of them, only one (Slovenia) has fulfilled the goal. One (Bosnia and Herzegovina) has a currency board arrangement (CBA) and one (Croatia) has a quasi currency board, while Serbia has managed floating without pre-determined path, Montenegro is an euroized economy (but keeping it's national central bank) and FYR of Macedonia has a fixed peg.

The focus of the paper is on the exchange rate regime and its role in achieving certain level of economic growth. The paper is organized as follows. Part two gives the theoretical background and literature review on the general theme of exchange rate regime choice. Special attention is given to the *de facto* and *de jure* distinction. Part three analyses exchange rate regimes in the countries from the sample and its influence on the main economic fundamentals. Part four concludes.

## II. HOW TO CHOOSE AN "APPROPRIATE" EXCHANGE RATE REGIME:

### *Theoretical background and literature review*

There are not many macroeconomic tools that raise so much attention like the choice of national exchange rate regime. The question of regime choice, including the analyses of the characteristics of the particular regime and results obtained with its use in practice has been widely discussed in the literature, both between academics and practitioners, but with little consensus.

In choosing an exchange regime, one might ask what is the "appropriate" or "optimal" choice of the regime? As stated in the IMF documents [1], the particular regime should be appropriate to the national circumstances enabling it to attain its main macroeconomics goals (in terms of growth and inflation) and should have a stabilization effect on country's international trade and capital flows. Finally, key international currencies should remain stable in order to enhance the overall stability.

There are few important aspects on this issue that are discussed in this paper as well. The analyze is based on the factors which determine the exchange rate choice and trends in classifications of the regimes, including also a distinction

between the *de facto* and *de jure* regimes. Some attention is given to the coordination of fiscal and monetary policy, especially in terms of crisis.

#### A. Factors of exchange regime determination

The discussions on exchange rate choice started when the collapse of the Bretton Woods system allowed the exchange rates fluctuation and continued with the financial integration processes (primary in terms of European Monetary System) and turbulent political environment.

Early papers determine the choice by the shocks hitting the economy. For those economies influenced with nominal shocks, recommended solution is the fixed regime, while the more flexible regimes are for those influenced by the real shocks. Other prerequisites are stability of macroeconomic indicators and credibility of national institutions (in terms of high inflation and low credibility of institutions the fixed regime is the natural choice), level of stability of national financial system and the development of the political processes. The dilemma: credibility vs. consistency (based on the well known Barro-Gordon model) strongly influences the choice of exchange regime. The inflation pressures on the credibility of national policy suggest the preferred choice of fixed regimes, although monetary policy is then passive and constrained with the exchange rate commitment. If the national economy has low credibility and weak institutions (in case of transition countries also in combination with little experience), fixed (or *pegged*) regimes will result in quick stabilization. The pegs were widely used during the 1980s and the first half of the 1990s, but the tequila crisis and the collapse of Argentinean currency board raised the questions on their sustainability, bringing intermediate regimes “back in the game”.

Reference [2] highlights the three main approaches to the exchange regime choice. First is arising from integration processes (based on the optimal currency area theories, including international trade and openness, country's size and type of shocks hitting the economy), followed by two other views: financial (arising as a consequence from the process of financial integrations) and political (credibility of the system, that is directly correlated to the dilemma on pegging the regime). Their analyses on the endogeneity of exchange rate regimes concluded that the currency mismatches are important for non-industrial countries, such as the institutional quality and sustainability of the regime.

Chosen monetary policy might strongly constrain fiscal policy. On one side the pressures from the fiscal side can result in the inflationary pressures that are described in “unpleasant monetary arithmetic” and fiscal theory of price level. On the other side, the choice of national exchange regime might constrain national fiscal policy, especially in terms of fixed regime. Current research [3] has shown that in terms of crisis, countercyclical fiscal policy<sup>1</sup> is strongly constraint with the fixed regime that leaves the country practically without national macroeconomic policy.

<sup>1</sup> The crisis fiscal policy that will be based on the cutting taxes and increasing the government spending.

#### B. Classification of regimes and main trends

There are a number of exchange regimes classifications, but probably the most influential one is that provided by the IMF. Besides defining the fixed and freely floating regime as the two poles of the system, there is also a number of regimes in between, described as intermediate regimes. These regimes are “a happy middle”, a combination of corners including target zones, basket, adjustable and crawling pegs and a number of possible combinations, providing individual solution for a national economy.

Number of authors, including the IMF's classification, made a heterogeneous list of regimes. The financial crises during the 1990s brought the “bipolar view” solution that predicted disappearing of the intermediate regimes, narrowing the choice to the remaining two corner solutions. According to that, countries should choose either a full flexibility or some kind of a commitment, with fixed exchange rate (the commitment might also consider entering the wider monetary union, using currency board or fully dollarized national economy). Fig. 1 shows the development of different exchange rate regimes. It partly confirms the bipolar trend, but is not that strong as described in the literature. Still, the decade ended in a quite neutral tone, concluding that there is no universal regime, neither for all countries nor for one country during the different phases of its economy cycle [4].

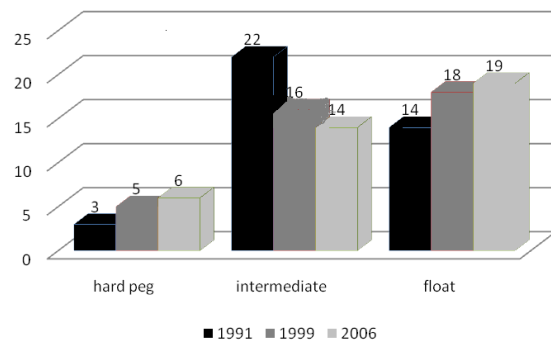


Fig. 1 Development of Exchange Rate Regimes in Emerging Economies, 1991, 1999, 2006

#### C. De facto? Or de jure?

Reference [5] highlights that, before discussing whether the choice of the particular regime is the right one, needs to be defined what the regime that the country has adopted is. That seemingly simple task in practice can be significantly harder, since officially floating countries might suffer from the “fear of floating” syndrome, while pegged (fixed) regimes rarely give strict guarantees of their retaining in the case of crisis.

Intriguing question in the past few decades arises from distinction between the official or *de jure* regimes and those *de facto*, regimes actually used in practice. That difference made analyses and measuring the real effects of the regime on national economy difficult and put the question of its correct definition on the first place. Some authors [1] draw attention to the fact that these two classifications do not measure the same thing. *De facto* regimes are a central bank's formal commitment to maintain the defined parity, while *de jure* regimes (might) include central bank intervention made in

order to maintain the predefined stability. Furthermore [6] pointed out that choice of *de facto* regime depends on the choice of *de jure* regime, but not the inversely. Reference [2] concluded that the trends in the exchange regime debate, visible in development of *de jure* regimes, are usually not followed by the *de facto* regimes.

The question that remains controversial is the future of the intermediate regimes that, despite expectations, did not vanish. Furthermore, some authors [7] advocate the intermediate regimes, concluding that the corner hypotheses are out and the different combinations of flexibility and credibility are the solution for the future.

Financial crises, ranging from the national and regional to the global crisis that hit the world from the mid 2007, strongly pressured the credibility and sustainability of exchange regimes worldwide. Fixed regimes, by definition, are more prone to crisis, especially in terms of open capital accounts [3].

The focus of this paper is on the economies of the region of ex-Yugoslavia, with particular interest on their exchange rate regimes, through transition to the actual trends.

### III. EXCHANGE RATE REGIMES IN EX-YUGOSLAVIA COUNTRIES

Table I shows classification of exchange rate regimes. *De jure* regimes are those stated by monetary authorities and reported as official to IMF. For *de facto* ones it was used IMF Classification of Exchange Rate Regimes and Monetary Frameworks done by the IMF staff in these countries. As Table I shows that all countries, except Croatia, follow their official (*de jure*) exchange rate regime.

TABLE I  
CLASSIFICATION OF EXCHANGE RATE ARRANGEMENTS

Country	Exchange Rate Arrangement				
	De jure		De facto		
	2008	2008	2006	2004	2003
Montenegro	1	1	n/a	n/a	n/a
Bosnia and Herzegovina	2	2	2	2	2
Croatia	5	3	5	5	5
Macedonia, FYR	3	3	3	3	3
Serbia	5	5	5	5	5
Slovenia	6	6	4	4	4

The meanings of the codes are:

n/a – not applicable

1 – Exchange arrangement with no separate legal tender (euro)

2 – Currency board arrangement

3 – Other conventional fixed peg arrangements (against a single currency)

4 – Pegged exchange rates within horizontal bands within a cooperative arrangement

5 – Managed floating with no pre-determined path for the exchange rate

6 – Independently floating

It is interesting that Serbia and Croatia are the two countries from the sample that had the same *de jure* exchange rate arrangements but their *de facto* regimes were completely

different. Serbia devaluated its national currency, the dinar, against the Deutsche Mark three times (the dinar was first devaluated by 69.7% in 1995, then by 45% in 1998 and finally by 80% in 2000). On the contrary, Croatia devaluated her currency only once within the Anti-inflation Stabilization Program introduced in 1993 when the Croatian dinar was fixed against the Deutsche Mark (1 DEM=4,444 HRD). Comparison of exchange rate movements (from 1993 onwards) in these countries shows that Serbia and Montenegro as well as Slovenia (until the adoption of euro) had active policies based on domestic currency devaluation in order to encourage domestic exports. Bosnia and Herzegovina based its monetary system on currency board arrangement rules and, therefore, it can not run active exchange rate policy. Croatia is the only country that, in spite of having monetary sovereignty, did not use it to devaluate home currency: on the contrary, it appreciated. The explanation for this kind of monetary policy can be found in the principle by which the monetary base is created almost exclusively through foreign exchange transactions. Since the inflow of foreign direct investments (FDI) in Croatia for the observed period was the highest, it explains why this channel was accepted as a cornerstone for primary emission of national currency, so the stable exchange rate was chosen as an effective nominal anchor for controlling price stability. Such exchange rate policies had numerous and different consequences on observed economies.

In the Case of Croatia, despite its official *de jure* regime that allows managed floating of the system, *de facto* is a quasi currency board in use. There are at least two confirming facts. *First*, the major channel for money creation is foreign currency transactions that are typical CBA characteristic. But, even more important is the *second* one that is based on the ratio between the international reserves and money (defined as the monetary aggregate M1a). As of November 2009 the amount of M1a was 6,336.38 mill € (7.3 HRK=1€) while at the same time the national bank had 10,375.80 mill € of reserves that is more than a 100% coverage (required by the CBA).

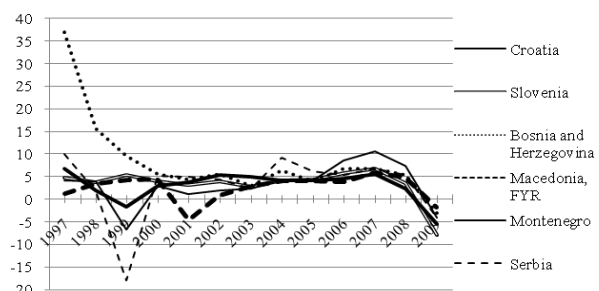


Fig. 2 Growth in real GDP (in percent)

We will analyze the main economic indicators for the countries in our sample, including their national specifics. Our analyses start with GDP real growth, presented in the Fig. 2. It is impossible to compare growth in GDP among selected countries before the year 2000 because the consequences of war from 1990s were strongly expressed especially in Bosnia

and Herzegovina and Croatia. After 2000 all ex-Yugoslavia countries (except FYR of Macedonia in 2000) had positive economic growth rates until 2009 when the global recession started the downward trend.

The strongest GDP growth during the 2001-2004 period was in Croatia, while Serbia's growth was the strongest during the 2004-2006 period and since 2006 Montenegro's.

The highest ponder in forming GDP in all of the selected countries was on consumption, generated mostly by the strong credit expansion of the commercial banks. Domestic consumption that was financed both with the domestic and increasing foreign accumulation resulted in increased deficit of trade balance in selected economies.

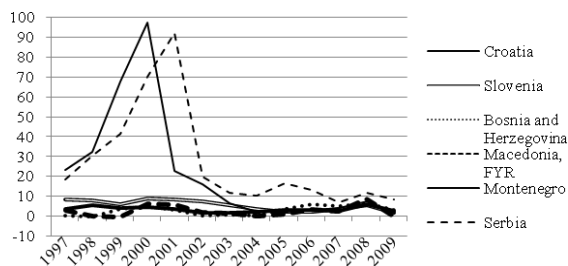


Fig. 3 Inflation (change in annual average retail/consumer price level, in percent)

Inflation is an important and permanent danger for these economies, partly because of their historic inflationary record, but also resulting from their institutional weaknesses. Regardless the exchange rate regime used in observed countries, since 2000 inflation in these countries was relatively stable (acceptable inflation rate less than 5%). Although Serbia put inflation under control after 2002, still it was twice higher comparing to other countries (Fig. 3).

Current account and trade balance (Fig. 4 and Fig. 5) are important indicators for exchange rate choice. The economies from our sample are small and open so their both internal and external balance can be determined by using the Mundell-Fleming model. Economies with fixed exchange rates and, consequently, passive monetary policy, need support from fiscal and other policies in order to achieve stability. In the case of floating exchange rate, the balance of payments reaches equilibrium so there is no need for consequent domestic money supply adjustments.

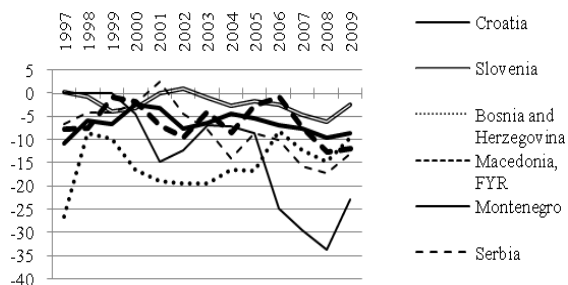


Fig. 4 Current account balance (in percent of GDP)

Further analyze of trade balances for given countries (see Fig. 5) leads to the conclusion that Croatian trade balance

deficit had the fastest growth. In the case of Serbia it can be noted that conducted devaluations had short-term positive effects on balance of payments. Although Serbia's deficit was also increasing, its increase was slower comparing to Croatia. However, unlike the other observed countries, deficit of tradable goods in case of Croatia was compensated by surplus in the non-tradables, mostly services, i.e. by surplus in the tourism sector. As Fig. 4 shows highest deficit of current account balance (expressed as percent of GDP) in the period 2004-2008 had Montenegro, Serbia and Bosnia and Herzegovina.



Fig. 5 Trade balance (in millions of US dollars)

International gross reserves had different growth dynamics, as presented in the Fig. 6.

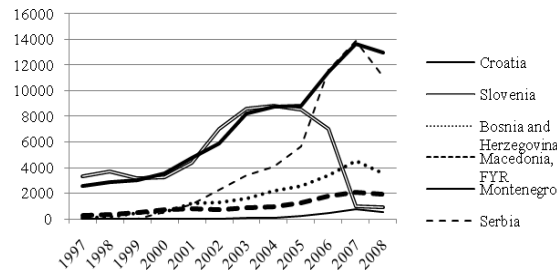


Fig. 6 Gross reserves, excluding gold (end-year, in millions of US dollars)

The fastest growth in international reserves had Croatia and Serbia, especially after 2000. This is a result of increasing FDI inflows in these two countries. Slovenia had a sharp fall in international reserves because after introducing euro as (official) national currency, money from the reserves was released in circulation.

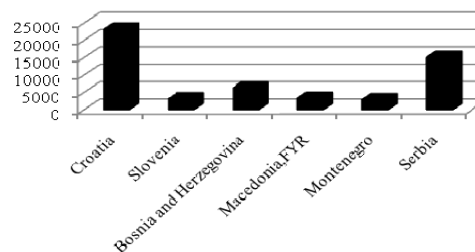


Fig. 7 Cumulative FDI (1989-2008; in millions of US dollars)

From the Fig. 7 given above it is visible that Croatia had the highest level of FDI during the observed period, followed by

the Serbia as the second highest. However, the FDI in all countries were predominantly oriented towards the financial sector, tourism (Croatia and Montenegro) and trade, followed by the oil industry (Croatia and Serbia). In Croatia, the FDIs were especially high in banking industry so 92% of the whole sector today is owned by the foreign capital. Slovenia and Serbia have internationalized smaller part of their banking sectors, so they are still predominantly domestically owned. As a result from the strong inflow of FDI, Croatia had strong appreciation pressures on its currency, despite the fact that the trade balance during the same period had growing deficit. It can be concluded that on the short term the FDI had a positive impact on economic growth in observed countries. But, given the long term, that contribution was significantly lower because all the countries from our sample went through the process of deindustrialization resulting in an unemployment rate growth with strong pressures to the social policies and, consequently, with negative influence on national budget. Fig. 8 presents the external debt/ GDP ratio.

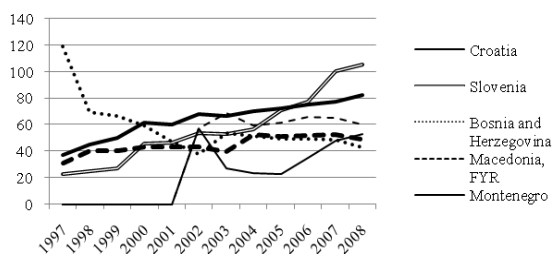


Fig. 8 External debt/GDP (in percent)

It is interesting to highlight that Slovenia had the greatest increase in external debt in the period that followed the EU full membership although it has put the least effort (among the observed countries) in the liberalization of the financial (especially banking) system. Final goal for the countries from our sample is full membership into European Monetary Union. Until then they might use their monetary sovereignty. Still, only Croatia, Serbia and FYR of Macedonia are in such position. Montenegro is in somewhat specific position since it has been unilaterally euroised but keeping the national central bank. Serbia has a managed floating regime and has so far used its monetary sovereignty in practice, as opposed to Croatia that was the only country to appreciate its currency during the observed period and *de facto* had a quasi currency board that is, by its characteristics, more rigid than that in Bosnia and Herzegovina.

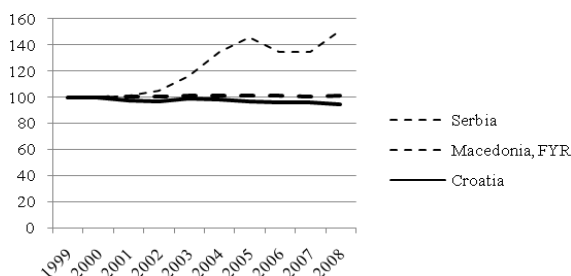


Fig. 9 Middle exchange rates against euro (index; base period 1999=100)

From the Fig. 9, that gives the middle exchange rates for Croatia, Serbia and FYR of Macedonia it can be concluded that Serbia has the strongest policy of exchange rate adjustment for two reasons: significantly higher rate of inflation (comparing to Croatia and FYR of Macedonia) and some structural problems in national economy.

The structure of central bank's balance sheet shows the level of monetary sovereignty, characteristics of national economy and exchange rate regime in use in some country. An analyse of the balance sheets of central banks of Croatia and Serbia clearly shows that the National Bank of Serbia still uses selective credit policy and the policy of giving credits to the state too. On the other side, Croatian National Bank can not give selective credits to any companies or sectors of national economy, while has been lending, but minor amounts to commercial banks. Consequently, Montenegro, Slovenia and Bosnia and Herzegovina use monetary policy of European Central Bank, regardless of their formal exchange rate and monetary agreement.

Croatian current practice has shown that the exchange rate policy will remain the same until the EU membership. From the given perspective, Croatia is already ready for European Monetary Union membership and should not go through the ERM II since the current exchange rate policy is more rigid than that requested from the ERM II. From the presented data, it can be concluded that Croatia from 1993 till today has never actively used its monetary sovereignty (nor the exchange rate policy), independently or in combination with other economy policies for stimulating competitiveness of national exports.

#### IV. CONCLUSION

The aim of the paper is to describe some of the main characteristics of the economies that originated after the collapse of ex-Yugoslavia. An insight into their monetary, but also macroeconomic policies, leads to the interesting conclusion.

An analyze of widening the flexibility of exchange rate in order to give stronger support the national export need to consider the trade-off between flexibility and financial stability of the system. This restriction arises from the fact that the banks in Croatia, Serbia and FYR of Macedonia have currency mismatches in their balance sheets. That mismatches exist not just in the banking, but also in other sectors of national economy. In case of external shock, these sectors typically react with real depreciation that has already been observed in Serbia and FYR of Macedonia but not in Croatia, where the exchange rate of national currency with the euro remained on the same level. Despite the high level of euroisation of the previously mentioned economies, the possibility of the introduction of target zones into exchange rate policy should also be considered. Such intermediate regime would give more flexibility to the system and contribute to the national policy in stabilizing balance of payments, playing active role in currency risk management, providing more maneuver space in terms of exchange shock and speculative attack on national currency.

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