SURVEYS

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EU Criteria with Special Emphasis on the Economic Convergence Criteria – Where is Croatia?

CROATIAN NATIONAL BANK

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Summary

The fulfilment of the convergence criteria, better known as the Maastricht criteria, is not a precondition for EU accession, but is a precondition for the adoption of the euro as a national currency. Only after a country becomes an EU member it can, subject to the fulfilment of the convergence criteria and successful participation in ERM II, be authorised to adopt the euro. This paper is focused on the (economic) convergence criteria. In addition to providing a methodological insight into each of these criteria, it discusses and analyses relevant Croatian indicators. An important goal of the paper is to assess the harmonisation of present Croatian indicators with the Maastricht criteria and examine whether these indicators can be used to compare Croatia with other countries, the present and future EU members. In this sense, the paper also indicates the areas where progress is yet to be made in order to attain a favourable starting position for participation in ERM II (once Croatia enters the EU) and the prospective adoption of the euro as the national currency.

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Contents

1 Introduction

The general public and sometimes even the professional community are quite often puzzled by numerous criteria of the European Union (EU). Probably the best known of these criteria, the Maastricht criteria, are often equated with the economic criteria for EU accession; the Copenhagen criteria are considered exclusively political criteria, and those who even heard of the Madrid criteria are quite rare. Such relatively superficial understanding of the criteria was one of motives for writing this paper. Still, the main motive has a more complex background. Quite a few Croatian experts believe that Croatia would benefit if it adopted the euro as soon as possible.[1] Putting aside the option of its unilateral introduction, the euro can be adopted only in agreement with the EU, and only after the EU accession. The said agreement depends on a country's successful participation in ERM II, which should last for at least two years, and on its fulfilment of the Maastricht criteria. Hence, it seemed interesting to consider at present (before negotiations with the EU begin) not only how individual Croatian indicators comply with the Maastricht criteria but also to assess if these indicators are methodologically adjusted with these criteria and thus comparable (in terms of values) with those of the EU countries. In this sense, a valuable contribution of this paper is that it highlights the areas where additional methodological adjustments are to be made to ensure the comparability of indicators. The paper also points to the areas in which the Maastricht criteria are presently not fulfilled, i.e. the areas where a progress of a "different kind" is required to fulfil some of the preconditions for the euro adoption.

In view of the stated motives and goals, this paper is structured in a way that it contains, in addition to this introduction, four sections. The following section describes in detail the EU criteria and defines two main groups of criteria: criteria for participation in the euro area[2] (i.e. for the euro introduction) and criteria for EU membership. The third section focuses on the Maastricht economic criteria, which are important for the euro introduction, and provides a detailed methodological analysis of each criterion. The fourth section analyses the methodological harmonisation of relevant Croatian indicators and compares their values with those of old and new EU member states. The final section sums up the paper's main ideas.

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1   See, for example, Šonje (2001a, 2001b, 2003) and Miljenović (1999).

2   A country becomes an EMU member at the moment it becomes an EU member, but with a derogation, which means that it does not immediately introduce the euro. The euro-area countries are only those that have introduced the euro.

2 Two Groups of Criteria – Three Cities: Maastricht, Copenhagen and Madrid

The above mentioned EU criteria can be divided into two groups: the first group contains the criteria that a country must fulfil to become an EU member (the Copenhagen and Madrid criteria)[3] and the second group comprises the criteria that a country must fulfil to enter the euro area, i.e. obtain full membership in Economic and Monetary Union (EMU), which implies the adoption of the euro as a national currency (the Maastricht criteria).[4] It should be noted that the time sequence of defining these criteria in the EU was actually reverse, which reflects the historical fact that when the idea of EMU was conceived it had not been possible to foresee a huge EU enlargement which included the Central and Eastern European countries.

The idea of monetary union was launched as early as 1970 when the Werner[5] Report provided a framework for EMU by proposing the basic stages of its creation, which included stabilisation and narrowing of the fluctuation margins between the currencies of the member states. Future stages included complete freedom of capital movements and an irrevocable fixing of exchange rates between the participating national currencies (Bukovšak et al., 2003). However, a formal beginning of EMU dates from 1988 when the European Council adopted the above stated guidelines and entrusted a committee headed by Jacques Delors, European Commission (EC) president at the time, with proposing concrete stages of EMU establishment (Fontaine, 2004). The idea of EMU establishment was quite complex. On the one hand, it was believed that EMU will remove the obstacles to the establishment of a single market, and therefore enhance political integration. In contrast to these reasons, which were of an internal nature, there was also an external reason – creation of a large currency area, which was to begin the competition for the position of a "global currency".[6] The historical "Delors Report" proposed that the process of EMU establishment be carried out in three stages:[7] a) stage one related to the completion of internal market establishment, reduction of disparity among economic policies of the member states, removal of all obstacles to financial integration and increased monetary cooperation, b) stage two, which was seen as the preparatory stage for the final phase of EMU, was to see the

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3   See Bilušić (2004), Brnčić et al. (2004), and *Conclusions of the Copenhagen European Council* (1993) and *Conclusions of the Madrid European Council* (1995).

4   The criteria from the *Treaty on European Union* (consolidated text), Official Journal C 325 of 24 December 2002.

5   Pierre Werner was the Prime Minister of Luxembourg and head of the working group entrusted with preparation of a report on how to reach the objective of establishing Economic and Monetary Union.

6   It is useful to remember that the meaning of global currency is much wider than the meaning of reserve currency (see Bekx, 1998).

7   The first stage lasted from 1 July 1990 to 31 December 1993, the second lasted from 1 January 1994 to 31 December 1998, and the third stage began on 1 January 1999.

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establishment of main EMU bodies and organisational structure, and enforcement of economic convergence, and c) stage three, in which exchange rates between national currencies were to be irrevocably fixed and monetary and economic responsibility be transferred to various Community institutions and bodies.[8]

In the legal sense, stage one was "covered" by the Community institutional framework existing at the time. However, stages two and three required amendments to the Treaty on the European Economic Community. The amendments were made in the Dutch city of Maastricht in February 1992 when the Treaty on European Union (Treaty), better known as the Maastricht Treaty, was signed. It created a basis for EMU establishment and provided the methods and time frame for its realisation in all member states, except Denmark and United Kingdom, which were granted special status (the "opt-out clause") that freed them from participation in the third stage of EMU. Hence, the Maastricht Treaty set the criteria (conditions) for participation in the third stage of EMU, i.e. the conditions that had to be fulfilled for the introduction of the single currency – euro. There were two basic conditions: a) achievement of a high degree of sustainable convergence (economic convergence)[9] and b) compliance of national legislation of each member state with Articles 108 and 109 of the Treaty (legal convergence[10]).[11] It should be noted that all countries that entered the EU after 1992 had to sign the Treaty and accept the whole "package", i.e. they could not use the opt-out clause that would free them from the euro adoption. Hence, all more recent EU members must introduce the euro. Still, this can be stalled by not participating in the exchange-rate mechanism (ERM II), as the example of Sweden clearly shows.

When discussing economic convergence and its criteria, it should be stressed that they are actually not related to the preconditions for the achievement of an optimum currency area (Winkler, 1996) as the latter preconditions are of a microeconomic nature and are primarily reflected in wage and price flexibility and

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8 Community is an abbreviated form of the former name – European Economic Community, the EU's forerunner. At the time the Delors report was prepared, the EU did not formally exist.

9 The economic convergence criteria can be generally divided into three monetary (inflation, interest rates and exchange rate stability) and two fiscal criteria (government deficit and public debt).

10 In addition to the ten new member states and the two mentioned members with special status, Sweden is the only member that has not yet joined the exchange-rate mechanism (ERM II), and it does not meet the convergence criterion referring to the exchange rate. In addition, it also does not meet the legal criteria. Since June 1998, certain parts of its central bank act, especially those referring to financial independence, have not been in compliance with EU regulations.

11 Article 121 of the Treaty also states that in their reports on convergence, the Commission and the European Monetary Institute (the ECB's forerunner) shall, in addition to examining whether a member state respects the convergence criteria, take account of other factors relevant for economic integration and convergence. These additional factors, which are not a part of the conditions necessary for the euro introduction, include the results of the integration of financial and commodity markets, the situation and development of the balances of payments on current account and an examination of the development of unit labour costs and other price indices. However, it is interesting that Protocol (20) (annexed to the Maastricht Treaty) entrusts the European Commission with ensuring the data for examination of the convergence criteria and describes in detail and defines these criteria but does not provide any references for this group of additional factors.

production factor mobility.[12] The Maastricht economic criteria are more general, macroeconomic criteria, which can be best interpreted as indicators of past, present and future credibility of member states with regard to their commitment for stability. The establishment of a stability culture was necessary to enable the European Central Bank (ECB) to maintain low and stable prices at low real costs. It simultaneously ensured a fair distribution of costs and benefits of the monetary union itself. Monetary union implies a common monetary policy, which means that it should be a kind of an average of member states' preferences regarding inflation. This implies welfare loss for a member state with relatively low inflation. Hence, such a country would not be interested in joining monetary union, unless it can set certain conditions, which basically means the preference for low and stable inflation (De Grauwe, 2000).

The above clearly shows that the idea and beginning of EMU establishment originate from the period prior to the fall of "the iron curtain". Hence, the criteria for the euro area are somewhat older, though not much older than the criteria for EU accession. Soon after the fall of the Berlin Wall in 1989, it became evident that many Central and Eastern European countries would be keenly interested in joining the EU.[13] In June 1993, at the European Council meeting in Copenhagen, a decision was made on the possibility that Central and Eastern European countries join the Union. It was concluded that: "Associated countries in Central and Eastern Europe that so desire shall become members of the European Union. Accession will take place as soon as an associated country is able to assume the obligations of membership by satisfying the economic and political conditions required." After the city where the decision was made, all these criteria (political, economic[14] and legal) were named the Copenhagen criteria. In 1995, these criteria were joined by the Madrid criteria, which require that the candidate country

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12 This may appear somewhat odd because it would be logically expected that when two or more countries decide on the entry into monetary union the primary role will be that of findings on symmetrical effects of shocks on their economies. Only in case of a symmetric shock effect there would be no need to change relative prices, and hence exchange rates among the countries within the Union. Otherwise, if asymmetric shocks prevailed, production factors (labour and capital) would have to be sufficiently mobile to sustain the established fixed exchange rate. If production factors are not sufficiently mobile, the adjustment burden is shifted to wages and prices, which have to be sufficiently flexible to ensure necessary adjustments of relative prices. Generally speaking, according to the theory of optimum currency area, there has to be an adequate combination of similarity among economies and their flexibility for a monetary union to be sustainable in the long-run (Frenkel and Rose, 1998). The question arises of whether it is possible to achieve similarity and flexibility subsequently and expect that the entry into monetary union "now" will speed up the homogenisation process? A positive answer to this question probably gives a country enough reasons to enter the monetary union and explains the creation of EMU.

13 In formal legal terms, an application for EU membership can be filed by any European country whose system is based on the principles of liberty, democracy, respect for human rights and fundamental freedoms as well as the rule of law (according to Article 49 of the Treaty).

14 It should be stressed that there is a significant difference between the Copenhagen and Maastricht economic criteria. Whereas the former are a reference for EU entry, the latter are a reference for entry to the euro area (i.e. introduction of the euro as the national currency).

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must create the conditions for its integration through the adjustment of its administrative structures. In other words, the Copenhagen political, economic and legal criteria were joined by the Madrid criteria, which concluded the package of criteria to be fulfilled prior to EU accession.

With regard to the questions of which political, economic, legal, and especially administrative criteria should be met and how does Croatia fulfil these criteria it should be stressed that the fulfilment of: a) political criteria implies that a candidate country (beforehand) achieves stability of institutions guaranteeing democracy, the rule of law, human rights and respect for and protection of minorities; b) economic criteria implies the existence of a functioning market economy, as well as the ability to cope with competitive pressures and market forces within the Union; c) legal criteria implies the ability to take on the obligations of membership, including adherence to the aims of political, economic and monetary union (i.e. adoption of the *acquis communautaire*); and finally, d) administrative criteria implies the creation of integration conditions by adjusting the country's administrative structures. These structures are important as it has been noticed that, in addition to the transposition of EU legislation into national legislation, effective implementation of this legislation through adequate administrative and judicial structures is even more important for this legislation not to be only a dead letter.

Currently the most relevant document that helps to answer to what extent does Croatia fulfil the stated criteria is the *European Commission Opinion on the application of Croatia for membership of the European Union* (Opinion). According to this document, with regard to the political criteria, Croatia is a functioning democracy, with stable institutions guaranteeing the rule of law. There are no major problems regarding the respect of fundamental rights. Croatia needs additional efforts in the field of minority rights, refugee return, judiciary reform, regional cooperation and fight against corruption. With regard to Croatia's cooperation with the International Criminal Tribunal for the Former Yugoslavia, the Opinion states that in April 2004, the ICTY Chief Prosecutor, Carla Del Ponte stated that Croatia is now cooperating fully with the ICTY. Croatia needs to maintain full cooperation, which means that it has to continue taking all necessary steps to ensure that the indictees are brought to court. On this basis, the EC confirmed that Croatia has met the political criteria set by the Copenhagen European Council in 1993. Regarding the economic criteria, the EC Opinion states that Croatia can be regarded as a functioning market economy. It should be able to cope with competitive pressure and market forces within the Union in the medium term, provided that it continues implementing its reform programme to remove remaining weaknesses.[15] With regard to the legal criteria, i.e. the ability to take on the obligations of EU membership, it is stated that Croatia will be able to

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15 This actually implies that at the time of writing the Opinion, Croatia did not meet the economic criterion. It is useful to note that this is not required at the time the European Council adopts a decision on granting membership to a country, but is required at the moment the country enters the EU.

take on the obligations of EU membership provided that it makes considerable efforts to align its legislation with the *acquis* and to effectively implement and enforce it in the medium term. However, it is stressed that full compliance with the *acquis* in the field of environment could be achieved only in the long term and would necessitate increased levels of investment. Finally, with regard to the administrative criteria, the Opinion states that Croatia has worked intensively towards aligning its legislation with the *acquis communautaire* and numerous important legislative texts have been adopted by Parliament in particular during 2003. However, in general, the establishment of the necessary administrative structures, and more generally the strengthening of administrative and judicial capacities have not developed at the same pace, thereby putting at risk the effective implementation and enforcement of the new legislation. Croatia needs to give particular priority to administrative and judicial capacity building and fully integrate this dimension into its National Programmes.

3 Maastricht Economic Criteria – Methodological Framework

There are actually five Maastricht economic criteria. However, formally speaking, Article 121 of the Treaty mentions only four criteria: price stability, government finance, exchange rate stability and long-term interest rates. The reason for this difference is that the government finance criterion comprises two sub-criteria: budget deficit and public debt. We have already discussed the reasons and purpose of these five (economic) convergence criteria. In this context, it was said that observance of these criteria enables a country's entrance into the third stage of EMU, i.e. the adoption of the euro as the national currency. This section aims at providing a detailed methodological insight into each criterion, since the specific (unique) methodology ensures the comparability of cross-country data, and their equal treatment by the EC.

3.1 Price Stability Criterion

The first criterion, the achievement of a high degree of price stability, is also the objective of central banks in general, and not only within the EU. The underlying reason for central bank orientation towards the maintenance of low and stable inflation may be found in the today generally accepted claim that low and stable inflation spurs economic activity and increases the standard of living.[16] A number of valid arguments support this claim, like for example, the argument that low and stable inflation: a) improves the transparency of the relative price mechanism, thereby avoiding distortions and helping to ensure that the market will allocate

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16   Numerous papers address this subject. See, for example, Feldstein (1996) and Akerlof et al. (1996).

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real resources efficiently thus raising the productive potential of the economy, b) minimises the inflation risk premium, thereby lowering long-term rates and helping to stimulate investment and growth, and c) avoids the large and arbitrary redistribution of wealth and incomes that arises in inflationary as well as deflationary environments, and therefore helps to maintain social cohesion and stability.[17] One could mention other reasons, like the maintenance of confidence in the national currency, but it is important to stress that there is also one important down-to-earth technical detail which makes low and stable inflation in all monetary union members a key prerequisite for the establishment and long-term sustainability of monetary union. This is the already mentioned distribution of costs and benefits of the union itself since a country with a preference for low inflation within a common monetary policy (which reflects the average of inflation preferences of all members) bears the cost in terms of welfare loss (De Grauwe, 2000). Hence, for a country with low inflation to be interested in monetary union, the price stability criterion must apply to all. Figuratively speaking, a country whose central bank has the highest degree of credibility regarding the maintenance of low and stable inflation requests that other members attain credibility through a process of disinflation, i.e. this credibility is seen as the "dowry" brought to monetary union, since credibility of the common central bank equals the average credibility of all central banks of the union members.

The achievement of a high degree of price stability is defined, under Article 121 (1) of the Maastricht Treaty, as a rate of inflation which is close to that of, at most, three best performing member states in terms of price stability. It should be mentioned that countries with the lowest rate of inflation (i.e. best performing countries according to this criterion) does not necessarily imply the countries with a negative rate of inflation.[18] With regard to the definition of measuring inflation, according to the *Protocol on the convergence criteria*, the average rate of inflation is measured as the arithmetic average of the indices[19] in the last twelve months relative to the arithmetic average of the indices in the corresponding previous period. The reference value of inflation, which is in practice important for adherence to the Maastricht criterion, is calculated as the arithmetic average of the rate of inflation of the three EU countries with best inflation indicators, increased by 1.5 percentage points. Hence, if the average inflation rate of the three

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17 See *ECB Monthly Bulletin*, January 1999.

18 Deflation is not the desired result. However, countries with a negative rate of inflation (deflation) are not considered as countries that fail to meet the inflation criterion (example of Lithuania, see *ECB Convergence Report 2004*). It should be said that there is some discretion in determining the "best performing member states", which provides that a certain country is noted as an exception, as has recently been the case with Lithuania. Still, in case of an external shock that would lower the price level, and lead to deflation in a large number of EU countries, the countries with the lowest rate of inflation, even if this rate were negative, would be considered "the best performing".

19 Inflation is measured by the CPI on a comparable level, taking account of differences among national economies.

best performing countries stands at 0.9% (as has recently been the case),[20] the reference value is 2.4%.[21] A member state whose inflation exceeds that reference value does not fulfil the stated criterion.

It has been mentioned that consumer price indices are used in measuring inflation. They show changes over time in the prices of consumer goods and services acquired, used or paid by population of a country over a certain time period. Also, these indices enable the comparison of costs of a market basket of goods and services in two time periods. In monitoring the inflation process, it is most important to monitor prices at the moment a decision to buy a product is made and not prices at the moment of payment, delivery or period of use. It is also appropriate to monitor prices of products offered in the market and scan their market prices, which include all taxes paid by consumers and all subsidies included in the product price.

Although the Consumer Price Index (CPI) is most often used as the measure of general inflation, it is also used to compare inflation movements with those in other countries. However, this raises the issue of the mutual comparability of these indices since the national CPIs are different in terms of the concept, methodology and practice. Therefore, they fail to meet the Treaty requirement that inflation has to be measured on a comparable basis. This creates a need to harmonise calculation methodologies and establish a high quality statistical instrument, which should ensure a high degree of comparability, reliability and timeliness. As early as twenty years ago Eurostat noticed the need to harmonise CPIs to achieve international comparability. However, following the adoption of the Maastricht Treaty, harmonisation became imperative.

Harmonised Indices of Consumer Prices (HICPs) were developed as a result of a several-year work of experts from national statistics institutions, central banks of EU member states, as well as the ECB and EC. These indices ensure that inflation is measured on a compatible basis, taking account of differences among national economies.[22] HICPs are a group of indices calculated according to the harmonised methodology and adequate legal basis.

The most important among them are:

· the Monetary Union Index of Consumer Prices (MUICP) – an aggregate index of consumer prices of EMU member states (euro-area countries), the key indicator of price stability for the ESCB[23] and the ECB.

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20 See *ECB Convergence Report 2004*.

21 It is interesting to note that the sample for calculating the average includes also the member states outside the euro area.

22 The legal basis for the establishment of a harmonised methodology is Council Regulation EC 2494/95. There are also a number of other provisions that complement this main framework and regulate in detail certain areas of implementation.

23 European System of Central Banks (ESCB).

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- the European Index of Consumer Prices (EICP) – for euro area and other EU members
- the European Economic Area Index of Consumer Prices (EEAICP) – the broadest of all indices, covers all 25 EU member states, as well as Island and Norway
- national HICPs – for each EU member state.

There are also HICPs for candidate countries and countries that have recently joined the EU. As a rule, once a country enters the EU, its HICP should be compatible with those of other member states. National HICPs are made by national statistics institutions, and aggregate HICPs are calculated and published monthly by Eurostat.

3.2 Government Finance Criterion (Criteria)

In a monetary union, i.e. in a situation where a country has no real influence on monetary policy and cannot use exchange rate policy, fiscal policy is actually the only instrument that can be used in economic policy implementation to maintain a macroeconomic equilibrium. In other words, fiscal policy is the only tool that can exert countercyclical effects in a short time period. This puts a rather large burden on the fiscal policy itself and increases the importance of the fiscal criteria and pursuit of sound fiscal policy.

In this sense, it is not surprising that the fiscal criterion/criteria is/are based exactly on the principle of sustainable fiscal policy, i.e. a policy that does not increase the risk of high inflation rates in the future. A country with a higher ratio of government deficit to GDP could prefer a higher inflation rate to inflate a portion of the debt away. To maintain price stability and a fair distribution of costs and benefits of EMU, it was necessary to establish the criteria that would ensure that each member state pursues a sound fiscal policy. The Treaty contains a sort of definition of such fiscal policy– fiscal policy that does not result in excessive deficits; in practical terms, fiscal policy that results in: a) annual budget deficit not exceeding 3% of GDP[24] and b) public debt (government debt) not exceeding 60% of GDP. There is some flexibility, so that a budget deficit above, but close to 3% of

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24 It should be stressed that the Stability and Growth Pact (SGP), which is a sort of an extension of the Maastricht Treaty as it explains in detail its provisions, defines sound fiscal policy as the one where the budgetary position is close to balance or in surplus (budgetary surplus). Such fiscal policy should provide sufficient room to deal with normal cyclical fluctuations while keeping the government deficit within the 3% of GDP reference value. It need not be stressed that all member states are required to strictly adhere to the SGP. The SGP commits member states to attain budgets close to balance or in surplus over the medium term (Directorate-General for Economic and Financial Affairs (2002)).

GDP is tolerated, provided that this is only temporary and exceptional.[25] If a country has previously run extremely high deficits, it is considered satisfactory if it has continuously reduced the budget deficit, if it has considerably reduced the deficit size and if its value has neared 3% of GDP. Similar flexibility exists with regard to public debt so that for a country with formerly extremely high public debt-to-GDP ratios it is considered satisfactory if this ratio has approached the reference value (60% of GDP) at a satisfactory pace.

At first sight, it is not obvious whether there is a deeper connection between 3% and 60%. However, with an across-the-board assumption that EU member states have on average a nominal GDP growth rate of 5%, which can, for example, result from a 3%-real growth at the average inflation rate of 2%, then the link between 3% and 60% becomes more obvious. In mathematical terms, 3% is actually 5% of 60%; in economic terms, in a country with a budget deficit of 3% of GDP and a 5% nominal growth, public debt will in the long-run stabilise at the level of 60% of GDP.[26] It is interesting to note that at the time the fiscal criteria were designed, the average public debt of the member states stood at some 60% of GDP, and their growth potential was estimated at 5%. All in all, this relationship may seem harmless, but in today's situation, when potential growth of "old" EU members is estimated at below 5% a year (in nominal terms), a question arises of long-term sustainability of the 60% of GDP criterion. Also, in countries whose rates of (potential) economic growth are higher, which have to simultaneously pursue fiscal policy of "low budget deficit" (below 3% of GDP), public debt will stabilise at levels below 60% of GDP. If one keeps in mind that EU member states with somewhat higher economic growth are new EU members, which would otherwise need more borrowing to attain the level of standard of "old" EU members, such fiscal rules (criteria) may seem somewhat inadequate or at least insufficiently flexible (Cuculić et al., 2004).[27] However, this discussion goes beyond the framework of this paper, particularly of this section, which aims at providing a detailed insight into the methodology of particular convergence criteria. So, let's go back to the methodology.

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25 The EDP (a part of the SGP) defines an exceptional event as an annual fall of real GDP of at least 2%. In case of an annual fall of real GDP ranging from 0.75% to 2%, the European Council decides whether this is a case of exceptional circumstances or not. It should be said that changes of particular provisions of the EDP, as well as of the SGP in general, are possible in the context of current discussions within the EU. For a discussion on potential reforms of the SGP, see, for example, Annett et al. (2005).

26 See Orbán and Szapáry (2004).

27 Bearing this in mind, the fact is that, in defining the fiscal criteria, the EC was above all guided by their simplicity in order to make them understandable, and thus equal, to all. A result of this simplicity is a loss of "quality", as well as controversy of the criteria themselves, which is best evidenced by discussions within the EU regarding amendments to the SGP (see, for example, Roller, *Reforme ugrožavaju euro*).

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With regard to monitoring and methodology of the fiscal criteria, first mentioned should be the *Protocol on the excessive deficit procedure* (EDP),[28] which establishes the methodological rules for the calculation of government deficit and debt and the rules for periodic reporting of the member states to the EC on planned and realised budget deficits and the government debt level. With regard to the methodology, the EDP relies on the European System of Accounts, 1995 (ESA 95), which has been the conceptual framework[29] for monitoring government finance in the EU since February 2000. It needs to be said that the EDP is mostly harmonised with ESA 95, although there are some minor differences (e.g. with regard to the budget deficit definition).

The EDP takes over the definition of the general government sector from ESA 95. This sector comprises the central government, local government and social security funds. In countries with a federal structure, there is also the fourth level – state government. It is important to mention that the general government sector does not include public enterprises. This sector includes all institutional units which are non-market producers whose output is intended for individual and collective consumption, and mainly financed by compulsory payments made by units belonging to other sectors and/or all institutional units engaged in the redistribution of national income and wealth.

With regard to government deficit definitions, the EDP definition is somewhat broader than that given in ESA 95. Thus, according to the EDP, government budget deficit, or more precisely, government budget balance (because there can also be a surplus) is equal to item net lending (+) / net borrowing (–)[30] increased by the net result of transactions based on swaps and forward rate agreements from ESA 95. In the context of the government balance, it is useful to mention that revenues from privatisation are not included in budget revenues, but are presented below the line in financing, and therefore do not affect the government balance, but only its financing structure.

On the other hand, with reference to the coverage of the government sector and definition of financial liabilities, the EDP definition of government debt is in line with the ESA 95 definition. Still, the method of debt evaluation is not harmonised in these two documents. According to ESA 95, government debt is valued at market value, whereas the EDP evaluates this debt according to the nominal value. The government debt balance (according to the EDP) equals the sum of gross liabilities, reported in nominal terms, of the general government sector in the following items of ESA 95: currency and deposits, securities (other than shares and excluding financial derivatives)[31] and loans. It should be stressed that

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28 In addition to the Protocol on the EDP, another important document is *Council Regulation (EC) No 3605/93 of 22 November 1993 on the application of the Protocol on the excessive deficit procedure*.

29 As a complement to ESA 95, Eurostat prepared *ESA 95 Manual on government deficit and debt*.

30 In ESA 95, item net lending (+) / net borrowing (–) is the difference between items total revenues and total expenditures.

31 Like, for example, swaps and trade credits.

government debt must be consolidated, i.e. those liabilities whose corresponding financial assets are with the general government subsector, must be excluded from calculations. In addition, contingent liabilities, for example, obligations arising on issued government guarantees or future commitments for pensions, are not included in government debt. Also, in determining the value of a certain liability, the interest accrued on that liability is not included. Finally, government liabilities denominated in foreign currencies have to be converted into the national currency at the market exchange rate prevailing on the last working day of a year. If a liability denominated in a foreign currency is, on the basis of an agreement, swapped for a liability denominated in one or several other foreign currencies, it has to be converted, under the exchange rate stipulated in the agreement, into that foreign currency and then into the national currency according to the general rule. The same applies to debt denominated in the national currency and swapped for debt in a foreign currency.

3.3 Exchange Rate Stability Criterion

Exchange rate stability, irrevocable fixing of exchange rates between participating national currencies, followed by elimination of cross-currency exchange rates between member states, are technical goals of any monetary union. However, its long-term sustainability is much less a technical matter and much more a matter of the attained adequate convergence level and of sustained efforts of member states to harmonise and continuously adjust their economic policies. It is extremely important that, before irrevocable fixing of exchange rates and entry into monetary union, a future member state is ready, i.e. that it attains an adequate level of real and nominal convergence. Otherwise, due to its insufficient harmonisation, it may suffer negative consequences, which may be finally reflected in low growth or even recession.

A short digression is in order to remind that real convergence implies the attainment of average income *per capita* of other member states, the implementation of necessary structural reforms and creation of institutional structures similar to those in the EU. Hence, we are dealing with a classic example of a catching-up process. On the other hand, nominal convergence implies the fulfilment of the Maastricht criteria, and is as such a necessary precondition for the adoption of the common currency (euro). Without doubt, real convergence is a long-term process, but the attainment of its adequate level is important, although not required,[32] for the entry into the monetary union since it enables easier adherence to the nominal convergence criteria (especially the price stability criterion). Why? In

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32 All members of a monetary union need not have the same level of GDP *per capita* for the union to function and be sustainable (an example is the EU itself). What is important for functioning of a monetary union is above all the readiness of all members to pursue a responsible fiscal policy and common monetary policy.

accordance with the Ballasa-Samuelson effect, the catching-up process will (due to faster productivity growth) require a higher rate of inflation in the country, which is not compatible with the Maastricht inflation criterion and the exchange rate criterion, if the adjustment is achieved via exchange rate appreciation (De Grauwe and Schnabl, 2004). As the catching-up process nears its closure, one should expect the weakening of the Ballasa-Samuelson effect and less difficulties in adherence to the nominal convergence criteria.

The Maastricht exchange rate criterion is one of the criteria showing the attained level of nominal convergence. An important, if not the main, motive for its establishment was the prevention of the potential abuse of competitive devaluations or depreciations prior to fixing of the exchange rates and entry to EMU, which was actually meant to eliminate any possibility of exchange rate manipulation for the purpose of attaining a better competitive position. In technical terms, the exchange rate stability criterion requires that an EU member state continuously participates in the Exchange Rate Mechanism II (ERM II) for at least two years, without serious tensions on the foreign exchange market and devaluation against the euro. Participation in ERM II is voluntary for member states outside the euro area. ERM II membership can take place any time after EU accession. There are no formal preconditions a country must fulfil to join ERM II.[33] However, since ERM II is a multilateral arrangement, all euro area countries, ECB and the country entering ERM II must agree on the central rate[34] and the fluctuation band relative to that rate.[35] In addition, it should be mentioned that ERM II also defines the nature of interventions at the margins and within the bands. Interventions at the margins are automatic and unlimited, with short-term financing available (up to three months) and can be conducted in the euro or national currencies of the participants in ERM II outside the euro area. Also, interventions in the

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[33] To ensure a smooth participation in ERM II, it would be necessary that major policy adjustments are undertaken prior to participation in the mechanism and that a credible (permanently sustainable) fiscal consolidation path is being followed (according to *Policy position of the Governing Council of the ECB on exchange rate issues relating to the acceding countries*, ECB Press Release, 18/12/03). In this sense, it is to be expected that a country will decide to join ERM II only if it is sure that it will be able to meet all "other" Maastricht criteria, in order to be in ERM II for a minimum required period. The fact that best shows that countries follow this line of reasoning is that out of 10 new EU member states only three (Slovenia, Lithuania and Estonia) decided to immediately enter ERM II upon their EU accession. It is interesting that these three countries also have the best fiscal position relative to other new EU member states.

[34] The central rate (central parity) between a member state's national currency and the euro will be used as a reference value to observe possible exchange rate fluctuations.

[35] The standard fluctuation band for the participating currencies is ±15%. However, it is possible that a participating country officially accepts a narrower fluctuation band of ±2.25%. Narrower margins can be set at request of the country itself, but only subject to a multilateral agreement. There is also an interpretation of this Maastricht criterion that sees the requirement to maintain the exchange rate "at the level close to a central rate against the euro" as a *de facto* narrower band (±2.25%). Following this path is also Kenen's statement at the IMF forum on euro adoption, where he said that the EC had explicitly said that eligibility for the euro adoption will depend on a country's ability to respect the ("old"), narrower margins (±2.25%) (IMF Survey, 2004).

foreign exchange market must ensure cohesion of the exchange-rate mechanism. However, it should be noted that the ECB and the central banks of the other participants could suspend intervention if this were to conflict with their primary objective of price stability.[36]

A well established central rate is extremely important for successful participation in the exchange-rate mechanism. It must be the best estimate of an equilibrium exchange rate of a participating country at the moment it enters the exchange-rate mechanism. Also, the initially set central rate should not be considered the final rate at which the national currency is to be exchanged against the euro. There is an institutional provision which differentiates between decisions on the central rate and on the conversion rate. These two decisions are adopted at different times and in different processes. In this sense, it is possible to decide on the new central rate during participation in the exchange-rate mechanism, as provided by the *Resolution of the European Council on the establishment of an exchange-rate mechanism in the third stage of economic and monetary union* (Amsterdam, 1997), the document that defines ERM II: "All parties to the mutual agreement, including the ECB, will have the right to initiate a confidential procedure aimed at reconsidering central rates", which may be initiated if, during the process of real convergence there are significant changes in external competitiveness.[37]

To test convergence with regard to the exchange-rate stability criterion during two years prior to the convergence assessment, a key reference for managing the foreign exchange rate is unofficial ECOFIN document *Acceding countries and ERM II* dated April 2003. It states that the assessment of the fulfilment of the convergence criteria and the procedures to be followed for the introduction of the euro will ensure equal treatment between future member states and the current participants in the euro area, i.e. there will be no additional criteria for new member states (Backé and Thimann, 2004). A minimum stay of two years in the mechanism prior to the convergence assessment without severe tensions is expected. Moreover, the assessment of exchange rate stability against the euro will focus on the exchange rate being close to the central rate. The ECB position on the assessment of exchange rate stability for two years of participation in ERM II is that the issue of "severe tensions" will be addressed by examining the degree of deviation of exchange rates from the ERM II central rates by using indicators such as short-term interest rate differentials vis-à-vis the euro area and their evolution, and by considering the role played by foreign exchange interventions. (ECB Press Release, 18/12/03).

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36 *Agreement between the European Central Bank and the national central banks of the Member states outside the euro area laying down the operating procedures for an exchange mechanism in stage three of EMU*, Official Journal of the European Communities C/345/6.

37 *Resolution of the European Council on the establishment of an exchange-rate mechanism in the third stage of EMU*, Official Journal C 236, 2/8/1997.

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3.4 Long-term Interest Rate Criterion

The last criterion refers to the alignment of long-term interest rates among the member states. In theoretical terms, this would mean that there are no inflationary pressures or pressures in the area of public finance that would considerably differ from those in other member states. However, as with the other criteria, the long-term interest rate criterion is not grounded on theoretical reasons but on a very pragmatic reason. This is the prevention of capital gains on bonds issued by countries that paid high premium due to exchange rate risk. If it is known that the exchange rate is to be irrevocably fixed, investors will sell low premium bonds (which will decrease the price of and increase interest rates on these bonds) and purchase bonds bearing higher interest rates (thus increasing the price of and lowering interest rates on these bonds). In other words, in a country with initially lower interest rates, interest rates will grow, and holders of its bonds will make a capital loss; in a country with initially higher interest rates, interest rates will fall, and holders of its bonds will make a capital gain.

The Maastricht Treaty states that "the durability of convergence achieved by the Member State and of its participation in the exchange-rate mechanism of the European Monetary System" is reflected "in the long-term interest-rate levels" (Article 121(1)). In order to practically monitor the fulfilment of this criterion, Article 4 of the *Protocol on the convergence criteria* states that compliance with the fourth convergence criterion "shall mean that, observed over a period of one year before the examination, a Member State has had an average nominal long-term interest rate that does not exceed by more than 2 percentage points that of, at most, the three best performing Member States in terms of price stability." Interest rates are measured on the basis of gross yield on long-term (10-year) government bonds or comparable securities, taking into account differences in national economies.

The choice of bonds whose yields are used as indicators of the long-term interest-rate level is based on the following criteria (the so-called statistical framework for the definition of the long-term interest rates):[38]

- bond issuer: bonds should be issued by the central government
- maturity: maturity should be as close as possible to 10 years' residual maturity
- choice of bonds: the applied bonds should be sufficiently liquid; this requirement should determine the choice between the benchmark approach (comparison with a benchmark bond) or the sample approach, depending on national market conditions; special feature bonds are to be omitted
- coupon effects: no direct adjustment
- yield: gross-of-tax

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38   These criteria were designed in 1994 by the EMI, the ECB's forerunner, in cooperation with the national central banks, and on the basis of an agreement with Eurostat.

- yield formula: the "yield to maturity" ISMA formula 6.3[39]
- data aggregation: where there is more than one bond in the sample, a simple average of the yields should be used to produce the representative rate.[40]

The purpose of these criteria is to ensure data comparability across the member states, taking account of the differences in the degrees of development of particular national capital markets and their abilities. However, it is useful to explain these criteria in more detail. With regard to *bond issuer* and *maturity*, the bonds applied should always be long-term bonds issued by the central government and traded on the secondary market, with a residual maturity of about 10 years.[41] This approach is based on the economic assumption that government bonds are the most secure type of bonds. It is therefore reasonable to assume that the prices of these bonds are relatively less affected by risk considerations. Also, government institutions cannot influence this indicator since the rates reflect the estimates of financial market participants regarding basic economic conditions, including credibility and sustainability of economic policies. It should be mentioned that harmonised long-term interest rates for 23 member states[42] are calculated on the basis of yields on long-term-bonds, but also that alternative solutions had to be found for two member states.

There are other solutions possible if there are no long-term government bonds (of the stated features) or if they exist but do not have the features of the benchmark long-term interest rate because there simply is not enough of them or they are not traded in the secondary market. In that case, it is possible to apply the yield on some other long-term financial instruments that would be comparable, as is the case with Estonia and Luxembourg[43] where long-term interest rates are measured on the basis of yields on comparable financial instruments. Thus, for example, the indicator for Estonia is based on banks' interest rates on long-term loans in the national currency (the Estonian kroon, EEK), granted to non-financial corporations and households, with maturity over 5 years. On the other hand, the indicator for Luxembourg is based on a basket of securities that have a common average residual maturity of approximately 10 years. These securities were issued by a private bank with a solid rating. These two cases are continuously monitored and a more appropriate, i.e. better instrument for comparison is permanently

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39 ISMA is the abbreviation for International Securities Market Association.

40 Sources: Eurostat, *Statistics in focus – Theme 2 -21/2004*; ECB, *Convergence Report 2004*; ECB (2003a) *Bond markets and long-term interest rates in EU accession countries*.

41 It should be stressed that the residual maturity should be as close as possible to 10 years (with the least possible maturity drift). In principle, the residual maturity should be between 9.5 and 10.5 years. In general, this method necessitates the regular issue of comparable bonds and regular changes of bonds in the basket to retain the residual maturity of 10 years.

42 Eurostat, *Metadata in SDDS format*, 7 October 2004; Eurostat, *Statistics in Focus-Theme 2*, 21/2004.

43 Estonia and Luxembourg are two EU member states with practically non-existent government debt.

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sought. As soon as it becomes available, it will replace the existing (temporary) indicators for long-term interest rates.

With regard to the criterion of the *choice of bonds*, it is most important that the applied bonds (i.e. their market) are sufficiently liquid. Hence, the approach used to choose bonds depends on the market liquidity. There are two approaches to the choice of bonds; one is based on a sample (sample approach), and the other is based on a single bond with all features of a market benchmark (benchmark approach). The advantage of the sample approach is that average yields calculated through samples are considered to be more stable over time. This is because the replacement of bonds in the basket is usually staggered, and so the renewal effects are dampened. However, in a small market, using a sample does not necessarily provide the best (right) result, as the range of liquidity could be very diverse. On the other hand, the *benchmark* approach takes into consideration only one bond (highly liquid and with a high yield) whose features form a sort of a market standard. The advantage of this approach is that this bond is highly liquid. However, there is also the risk of maturity drift with regard to the residual maturity (of 10 years), as it may be assumed that in small markets such bonds are not issued in regular and small time intervals. This method necessitates the issue of comparable bonds (at least) once a year.

With regard to the next criterion related to the choice of bonds – *coupon effects*, it should be said that, in practice, there is no suitable way of directly adjusting for coupon effects. In technical terms, there is a positive relationship between coupon and price (higher coupon – higher price) and an inverse relationship between price and yield (higher price – lower yield). The extent to which changes in bond prices affect the yield is weighted by the coupon value. If coupons significantly differ across countries, neither the yield nor its changes will be comparable.

With regard to the treatment of *yield*, it should be mentioned that the complexity of calculating net-of-tax yields can vary considerably according to the method used and the kind of tax to be netted out. Therefore, gross-of-tax yields should be used in the interest of comparability.

The *yield formula* applied, which is the same across all member states and meets ISMA recommendations, is:

$$P = \sum_{i=1}^{n} CF_i * V^{L_i} \qquad (1)$$

where *P* is gross price (clean price plus accrued interest), *n* is the number of future cash flows, CF_i is the i-th cash flow (can be variable), L_i is the time in years to the i-th cash flow, and *V* is the annualised discounting factor $= I/(I+y)$, where y is the annualised yield. The advantages of this formula are its flexibility and versatility. It allows for flows of funds which are not exactly equal and for payment periods of different lengths.

Finally, with regard to *data aggregation*, although the yield formula allows the use of the portfolio approach (i.e. that more than one bond is included in the

sample),[44] simple averaging is recommended as the most suitable approach. The long-term interest rate is calculated as the arithmetic average of rates recorded in the twelve months before the examination of convergence observance, for which the HICP is available. It is important to mention that the data are not seasonally adjusted. In geographical terms, the data include the euro area, aggregate and national series for the EU-15 and EU-25. As of 1 January 1999, the weights for each euro area country have been based on the volume of government bonds with a residual maturity of about 10 years. The weight used for the EU-25, EU-15 and the euro area countries prior to 1999 was national GDP at current prices and PPP.[45]

4 Where is Croatia?

Before negotiations on Croatia's accession to the EU begin, it is interesting to determine the extent to which Croatia already fulfils individual Maastricht criteria. Although the fulfilment of these criteria is not relevant for EU membership,[46] understanding the level of their (non)fulfilment may be useful for Croatia to make the necessary steps to fulfil all Maastricht criteria by the time it joins the EU. This would enable a fast entry to ERM II and increase the probability that the euro is introduced as the national currency in the shortest possible period following the EU accession. This can be interpreted as if it means that it is crucial to create the prerequisites to introduce the euro as the national currency as soon as possible. Such an interpretation would not be wrong, especially if it is assessed that the benefits of an expeditious euro introduction would outweigh its costs. There is a number of concrete economic evidence supporting a speedy introduction of the euro (Šonje, 2001a). First, the euro adoption would eliminate the need to hold surplus international reserves, which would additionally foster convergence of Croatian interest rates with EU interest rates. Second, monetary policy could produce countercyclical effects. Third, the difference between domestic and external debt would disappear, so that the government could borrow anywhere in a transparent manner and under the same conditions, which would lower total government financing costs. Fourth, price comparison would be easier, which would boost the efficiency of international trade; the costs of conversion into the euro would disappear, which would create an environment suitable for fast development of financial markets. Finally, and perhaps the most important, the euro adoption would practically eliminate currency risk from all balance sheets.[47] This

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44 They can be treated as one series and discounted together at the same rate.

45 See Eurostat (2004d): *Interest Rates: Maastricht Criteria Bond Yields*.

46 See the first section of this paper.

47 There would still be bank deposits denominated in US dollars and Swiss francs (and other non-euro deposits), and some loans would still be indexed to Swiss francs, but this is actually irrelevant.

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risk is reflected in indirect credit risk[48] within the banking system, which can be eliminated by either deeuroisation[49] or the euro introduction. The historical experience of countries world wide shows that there has not been a case of deeuroisation or dedollarisation in countries with initially high levels of euroisation (dollarisation). In addition, even if deeuroisation were a possible option, it would not be wise to spend resources on deeuroisation just a few years before the euro is introduced as the national currency. To all appearances, the introduction of the euro in the shortest possible time would unquestionably bring multiple and considerable benefits to Croatia, which would, by and large, considerably surpass potential costs (Šonje, 2001a).

4.1 Does Croatia Meet the Price Stability Criterion?

Since January 2002, the average annual rate of inflation in Croatia has been measured by the consumer price index (until then it was measured by the retail price index). The methodology for its calculation differs from that used by EU institutions, although in preparing the Draft methodology for the CPI in Croatia efforts were taken to adjust it as much as possible with the requirements for HICP calculation and with national abilities. Still, it should be stressed that the Central Bureau of Statistics (CBS), parallel to the CPI, calculates also the HICP, which is mostly in line with the Eurostat methodology. However, it will not be released for the time being to avoid confusion.[50]

In view of the (publicly) available data on inflation, it is impossible to make relevant comparisons with the EU data due to a methodological mismatch. Nevertheless, it is useful to point to the average annual rates of inflation in Croatia in the previous three years during which it has been measured by the CPI. The CBS data show that the average rate of inflation was 1.7% in 2002, 1.8% in 2003 and 2.1% in 2004.

If data on inflation corresponded to the data on the HICP, i.e. if they were methodologically comparable with EU data, Croatia would already fulfil the inflation criterion (see Figure 1).

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48 Indirect credit risk arises from the fact that banks grant loans with a currency clause, whereas most clients taking these loans receive income exclusively in kunas. In case of a stronger depreciation, the burden of loan repayment could become too heavy for the clients, and they could become unable to repay their loans on time.

49 Deeuroisation implies reversibility of euroisation, i.e. its reduction.

50 *Staff Report for the 2004 Article IV Consultation and Request for Stand-By Arrangement*, 16 July 2004, pp. 48-49, available at www.hnb.hr.

Figure 1 Overview of Average Rates of Inflation in the EU and Croatia
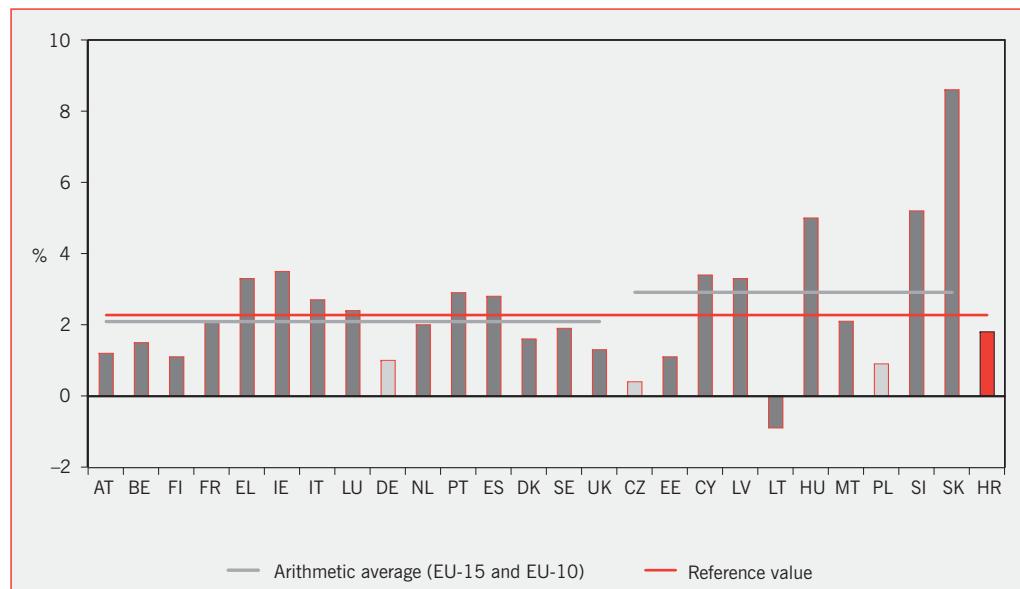
Observed period: March 2003 – February 2004; the best performing member states in terms of inflation are presented in a different colour. A corresponding comparative period was taken for Croatia. It should be noted that if one considered more recent data, up to February 2005, Croatia would not meet the inflation criterion, since the reference value is still at the level of some 2.2%, and the annual rate of inflation in Croatia was 3.3%. Inflation growth to the level above 3% was caused exclusively by price developments in February 2005 when, largely due to the harsh winter and the related strong upturn in prices of agricultural products, inflation growth was 1.1%.

Sources: Eurostat, *Statistics in Focus – Theme* 2-21/2004; Croatia: *CNB Annual Report* 2004.

With regard to the question of whether Croatia's convergence to the EU would severely disturb the existing stable and very low inflation rates, it should be said that convergence of the national price levels to average EU prices is a long-term process, not only in the transition countries but also in old EU member states. This is best evident in the fact that some countries, e.g. Greece (see Table 1), still lag far behind the EU with regard to average prices notwithstanding almost twenty years of EU membership. In addition, it is significant that international comparisons of the price levels and real income show that, with the exception of Slovenia, the Croatian national price level is somewhat higher than that of other Central and Eastern European countries in transition (see Table 1), and it is not very far from the price level in some EU countries, like Portugal and Greece. Hence, it may be expected that Croatia will have less "problems" in the adjustment process relative to most other transition countries. This is supported by the fact that the Croatian price structure is relatively similar to that of the EU. Hence, structural shocks (in terms of changes in relative prices) should not be especially severe. Finally, there is another argument suggesting that the fulfilment of the inflation criterion should not be a problem, and that is that there are certain mechanisms of an administrative nature, which, in case "problems" arise, may influence a deceleration in price growth. This refers to the option to decrease indirect taxes (for example, excise duties on refined petroleum products) and restrict (decelerate) growth in administrative prices. Although all these arguments support our belief that there is no serious threat to the already achieved low and stable

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inflation, one should be cautious in making final conclusions. It is simply impossible to know the pace of the convergence process of the national price level to the EU average, as it is impossible to know what external shocks (like the recent price increase of agricultural products due to weather conditions, or the increase in oil prices) may appear along the way. In principle, these external shocks affect all countries, but it should be assumed that prices in smaller countries, which are more sensitive to these shocks, will be relatively more affected. In addition, one should bear in mind that the price stability criterion is a moving target, i.e. the reference value is not fixed, as is the case with the fiscal criteria. This fact may hinder the fulfilment of this criterion since the central bank cannot be exclusively oriented towards a precisely set inflation rate. By and large, further efforts will certainly be needed to maintain inflation at low one-digit levels. In this regard, the key to success may be good coordination between monetary and fiscal policy.

Table 1 National Price Levels in Selected Countries (EU-15 = 100)

Country	2000	Country	2000
Croatia	56	Ireland	104
Slovenia	65	Germany	103
Poland	50	France	102
Hungary	44	Austria	99
Czech Republic	43	Italy	87
Slovakia	38	Spain	82
Romania	34	Greece	76
Bulgaria	29	Portugal	73

Sources: Nestić (2004) and *Summary Results of ECP 2000*.

4.2 Does Croatia Meet the Fiscal Criteria?

With regard to the fulfilment of the first fiscal criterion – the budget deficit criterion – it should be said that the method used to calculate the budget deficit in Croatia methodologically does not correspond to EU requirements. In Croatia, the framework for monitoring public finances is based on the methodology of GFS 2001,[51] which was prepared by the IMF. For the purposes of monitoring the convergence criteria, it is necessary to calculate the budget balance according to the ESA 95 methodology. The Croatian budget balance is reported on a modified accrual basis, i.e. revenues are recorded on a cash basis and expenditures are recorded on an accrual basis.

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51 *Government Finance Statistics Manual* (2001).

The fact remains that many new EU member states have not yet completely harmonised their methodology with ESA 95.[52] ECB documents stress the problems of consolidation within government units and netting of transactions. In this sense, indicators on the fulfilment of the fiscal deficit criterion, shown in Figure 2, should be taken with a pinch of salt, both with regard to Croatia and with regard to individual EU member states.

Figure 2 Government Budget Balance in Terms of GDP, 2003
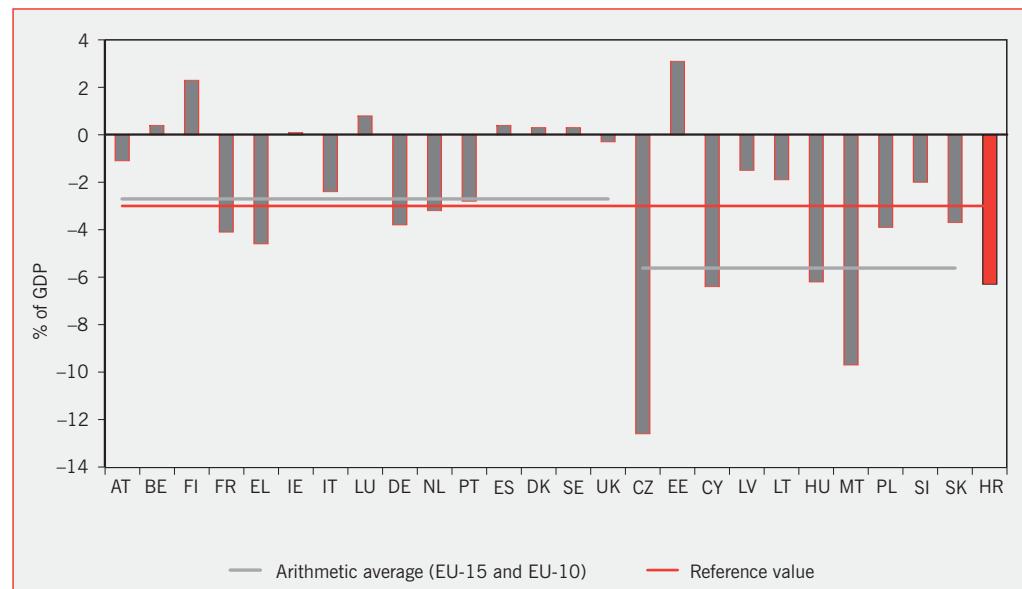
Sources: Eurostat, *Euro-indicators – News Release*, September 2004; Croatia: *Annual Report of the Ministry of Finance 2002 – 2003*.

Considering the size of the Croatian government budget deficit, which stood at 6.3% of GDP in 2003, Croatia definitely does not fulfil this fiscal criterion. It is however interesting that Croatia, despite its high budget deficit, is not very different from the average of new EU members.

With regard to the other fiscal criterion – the debt criterion – it should be said that, according to the *Budget Act*,[53] the government debt in Croatia is defined as the debt of the consolidated government budget without government guarantees. As such, it is in line with GFS 2001. However, there is also the public debt definition which, in addition to the stated government debt, includes also government guarantees, which are not included by the GFS 2001 methodology.[54] Technically speaking, public debt includes: a) the debt of the central government and of

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52 *Convergence Report 2004* states that data on public revenue and expenditure are not entirely in accordance with the ESA 95 accounting rules, and as such are not entirely comparable with this type of data for the other member states.

53 *Budget Act*, official gazette *Narodne novine*, No. 96/2003.

54 *Annual Report of the Ministry of Finance 2002–2003*.

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former extrabudgetary funds, b) debt of Croatian Highways and Croatian Roads, c) debt of government funds and agencies (CPF and DAB), d) debt of 53 local government and self-government bodies, e) debt based on issued government guarantees to users outside the general government sector, and f) direct debt of the Croatian Bank for Reconstruction and Development. (All government guarantees issued to the CBRD are excluded to avoid possible double reporting of the debt, since the government often guarantees for CBRD debts and guarantees).[55]

In other words, the public debt comprises the consolidated general government debt, including the guarantees issued. These guarantees are the main methodological difference between GFS 2001 and ESA 95 methodologies. ESA 95 and GFS 2001 both stipulate that government guarantees should be included only when activated. Otherwise, guarantees are not included in the debt amount. Other possible methodological differences in debt reporting in Croatia, relative to the reference methodology for monitoring the public debt criterion, arise solely on the basis of differences between GFS 2001 and ESA 95 methodologies, i.e. between GFS 2001 and the EDP methodology, since the EDP is the reference for public debt calculation.[56] Since there are still some methodological differences, it may be concluded that the statistics of the Croatian government debt (excluding guarantees issued) is not entirely adjusted to EU requirements.

The problem of the methodological mismatch exists even in new EU member states. This should be remembered in analysing the values shown in Figure 3. It is important to mention that Figure 3 shows the value of the Croatian government

Figure 3 Public Debt in Terms of GDP, 2003
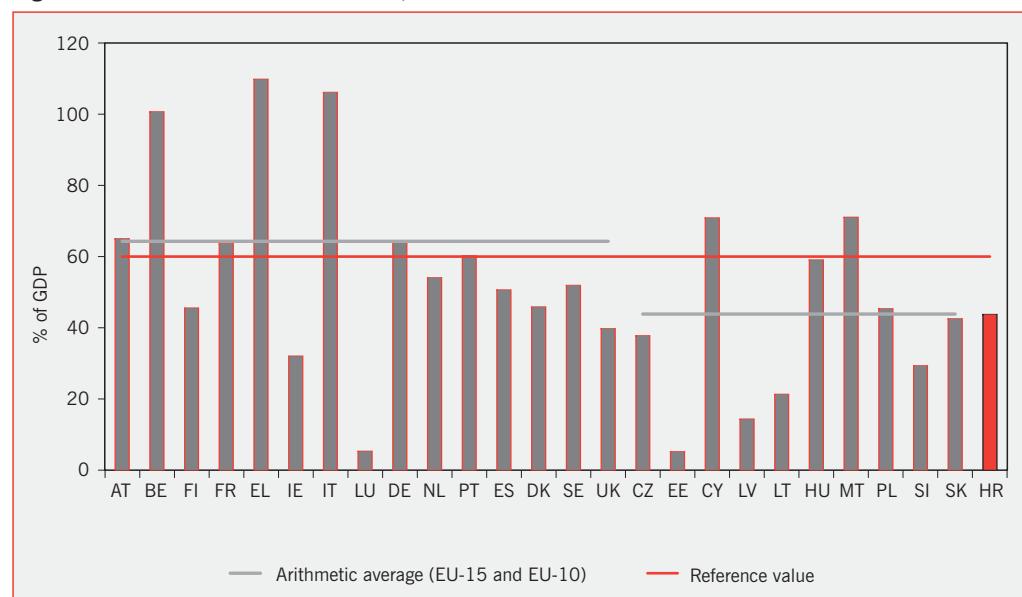
Sources: Eurostat, *Euro-indicators – News Release*, September 2004; Croatia: *Annual Report of the Ministry of Finance 2002 – 2003*.

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55   *Annual Report of the Ministry of Finance 2002–2003*.
56   A comparative overview of EDP and GFS 2001 is given in Appendix.

debt without guarantees issued, which provides for better comparability. It may be noticed that Croatia fulfils this fiscal criterion with a rather large margin, which is also the case in most other new EU member states.

4.3 Does Croatia Meet the Exchange Rate Stability Criterion?

At present, it is irrelevant to discuss whether Croatia meets this criterion since its fulfilment requires successful participation in ERM II for at least two years, and participation in ERM II depends on a country's accession to the EU. Someone may simplify the whole thing by saying that fluctuations in the exchange rate of the kuna against the euro over the last decade have been rather small and support this statement by presenting the movements in the kuna/euro exchange rate over the last ten years. Although the attained exchange rate stability is undoubtedly a success and the existing exchange rate regime is compatible with ERM II, it cannot be concluded that Croatia already formally meets this criterion. It should be remembered that ERM II is a multilateral arrangement within which the central rate of the kuna against the euro is determined in a way that all countries together agree on a single central rate (kuna/euro). This central rate, agreed by all, will later enable the assessment of the country's (in this case, Croatia's) successful participation in ERM II. In this estimate, it will be most important whether the exchange rate moved close to the central rate over these two years, i.e. within the margins of a narrower interval (±2.25%). In addition, one should not forget another essential problem. Prior to EU accession, all capital transactions will have to be liberalised. It is encouraging that they have already been liberalised to a large extent, so that they should not lead to major changes in capital flows. However, in the context of the catching-up process (real convergence), especially if it is primarily manifested in appreciation pressures (instead of higher rates of inflation), it may be said that there is some uncertainty regarding the maintenance of the exchange rate within a narrow fluctuation range (±2.25%). Bearing this in mind, it is obvious that it is presently impossible to say something of real relevance with regard to the fulfilment of the exchange rate stability criterion.

4.4 Does Croatia Meet the Long-term Interest Rate Criterion?

In the domestic market, there are no 10-year central government bonds in kuna, i.e. there is no interest rate that, in view of the methodological requirements, could be considered a benchmark rate. Moreover, there are relatively few government bonds in the domestic market, and those that exist are, as a rule, issued with a currency clause. The reasons are a high degree of euroisation of the Croatian market[57] and the former practice of the general government to rely more on external

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57 For the sake of illustration, Croatian citizens hold over 80% of their savings either in foreign currency deposits or in kuna deposits with a currency clause (*CNB Annual Report 2003*).

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funding sources. Hence, it is not surprising that there are only two series of bonds issued in the Croatian kuna with a maturity of 5 years. Bearing this in mind, one may reasonably ask how a benchmark long-term interest rate is to be set.

The answer to this question is definitely beyond the scope of this paper. However, one may ask why not take the interest rate on government bonds issued with a currency clause as a benchmark rate, and mention that there is one series of bonds indexed to foreign currency with a residual maturity of 10 years. However, without taking account of the volume of trading in these (and similar) bonds, the fact remains that a bond issued with a currency clause cannot be accepted as a benchmark bond.

If one cited the example of Estonia where long-term interest rates on loans are currently considered as benchmark rates, the optimism would soon vanish as well. In Croatia, even these loans are indexed to foreign currency, which is again the consequence of an extremely high level of euroisation, which makes it hard to determine a long-term interest rate that would be suitable as a reference value. All that can be done is to wait and see how the situation in the domestic securities market develops. It is possible that by the time Croatia joins the EU, the situation on the financial market changes in a way that there is increased demand for government kuna bonds. The government could satisfy this demand, especially in the light of its recent intentions to increasingly finance the budget deficit from domestic sources.[58] In this context, it is useful to mention the case of Greece where

Figure 4 Long-term Interest Rates Based on Yields on Long-term Bonds
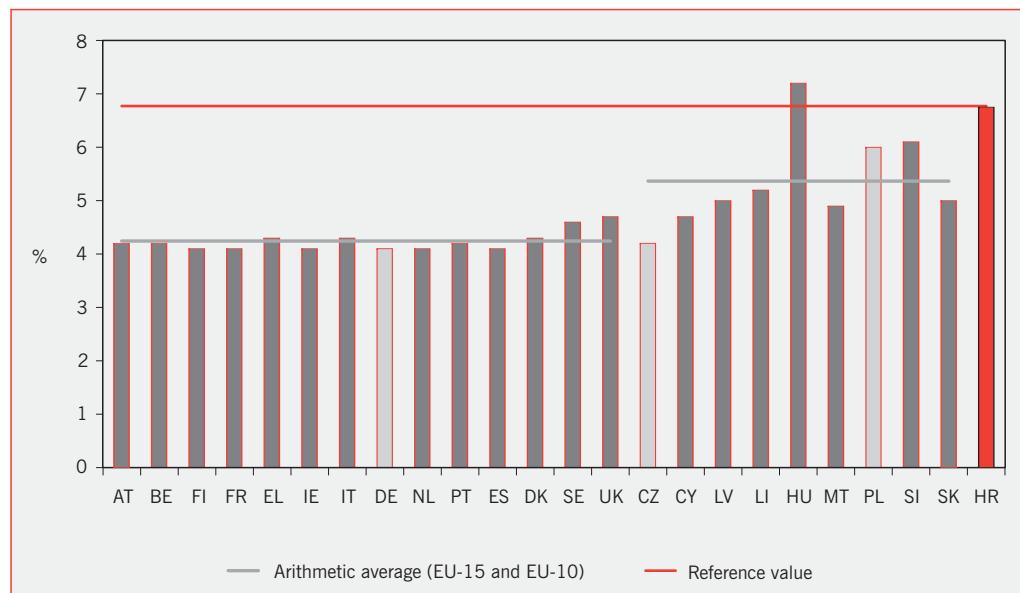
The arithmetic average of monthly rates in the observed period (March 2003 – February 2004); the best performing member states in terms of inflation are presented in a different colour.
Sources: Eurostat, *Euro-indicators – News Release*, September 2004; Croatia: *Annual Report of the Ministry of Finance 2002 – 2003*.

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58   These government intentions are mentioned in the context of alleviating pressures on the increase in external debt in general.

the data on yields on 5-year government bonds were formerly used to calculate benchmark rates. Hence, it is not necessary that Croatia starts issuing 10-year government bonds in kuna by the time it enters the EU. What is important is that there are bonds (or some other instruments) that are highly liquid and can be used as the reference for calculating long-term interest rates.

It may seem irrelevant, but we believe that it is useful to provide a graph showing the data on long-term interest rates in the EU member states, and include the data on the most recently issued Croatian government bond in kuna, although it does not meet the requirements for the reference value. One should bear in mind that this bond has a residual maturity of almost 5 years, as it has been recently issued,[59] and bears a 6.75% coupon. It is interesting to note that if this government bond were to be accepted as the benchmark bond, Croatia would meet the long-term interest rate criterion.[60] Croatia would be a marginal case, thanks to Poland, a country among the three best performing member states in terms of the inflation criterion, but also a country with relatively high interest rates relative to other EU members (which considerably increases the reference value of interest rates). Following this example, one may make a joke and say that a country that is certain it cannot fulfil the interest rate criterion can actually do so by striving to be among the three countries with the lowest inflation rate, because it would then automatically meet the interest rate criterion as well.

5 Instead of Conclusion

This paper attempts to provide a simple presentation of the difference between the criteria that have to be met prior to EU accession and criteria for the euro introduction. Special attention is paid to the Maastricht economic criteria (price stability, fiscal criteria, exchange rate stability and long-term interest rates), whose methodological basis is presented. It is shown that corresponding Croatian indicators are largely not methodologically harmonised, and thus comparable, with the same type of data for EU member states, with the exception of data on price stability. The CBS has already made the HICP, which is mostly in line with the Eurostat methodology. With regard to the other criteria, the level of alignment is rather low or it is currently irrelevant to discuss them. For example, with regard to

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59   At the time of writing this paper, in March 2005.

60   In this conditional statement, it should be noted that the interest rates for EU member states refer to the March 2003 – February 2004 period, which is fully consistent with the periods of data used in previous figures. However, if we took into consideration the most recent data on interest rates, we would notice a considerable decline in the reference value of long-term interest rates, which occurred in March 2005, to some 5.7%. This implies that, in view of the present circumstances, Croatia would not meet the long-term interest rate criterion. The reason for this decline in interest rates is primarily that Poland is no longer among the three best performing member states in terms of inflation. Finland, Denmark and Sweden are currently the three best performing member states in terms of inflation.

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the criteria related to government finances, methodological alignment is weak, and to a large extent depends on methodological alignment of the two international standards for monitoring fiscal accounts – GFS 2001 (methodological basis used in Croatia) and ESA 95 (methodological basis used in the EU). It is currently irrelevant to discuss the exchange rate stability criterion and its methodological adjustment. With regard to this criterion there is no methodological basis that is required for comparison purposes. Instead, the fulfilment of this criterion is achieved via successful participation in ERM II, which a country may join only upon entering the EU. However, prior to Croatia's entry into the EU it will be important to determine the most suitable value of the central rate of the kuna against the euro, and this is an effort that cannot be compared to the job of a technical methodological adjustment. Finally, with regard to the long-term interest rate criterion, it should be first determined which interest rates would be most suitable for comparison. This is going to be a rather unrewarding task in view of the existing high euroisation of the Croatian economy.

All things considered, energetic efforts will be needed in the area of methodological harmonisation, as well as a research project related to the determination of the most suitable central rate. Putting this part of the "technical" task aside, and observing the existing values of particular Croatian indicators, it is evident that efforts of a "different kind" will be needed in certain areas to meet the Maastricht criteria. This primarily relates to the need for further fiscal consolidation, which will (in)directly provide for a relative reduction of long-term interest rates. One should not neglect the permanent need to maintain the already achieved low rate of inflation, which will not be a simple task in the light of further convergence of the Croatian price level to that in the EU.

Finally, it should be underlined that hard work will not be over once the Maastricht criteria are fulfilled and the euro is introduced. Sustained efforts to permanently meet all criteria, and thus ensure competitiveness of the Croatian economy in the EU will then only begin.

Appendix

Table 1 Comparative Overview – EDP and GFS 2001

EDP	GFS 2001
– gross debt	– gross debt
– accrual basis	– accrual basis
– consolidated	– consolidated
– nominal value	– market value (but with a provision for recording the nominal value of debt securities as a memorandum item)
– covers general government liabilities, categories: currency and deposits, securities other than shares and excluding financial derivatives, and loans	– debt comprises all liabilities that require principal and/or interest payments; all liabilities in GFS are debt liabilities, apart from shares and financial derivatives
– does not include accrued but unpaid interest	– includes accrued but unpaid interest (allows for the option that they are monitored according to national practices and classified under "accounts payable")
– government guarantees included only when activated	– government guarantees included only when activated, public debt of the Republic of Croatia includes all issued government guarantees (as of 2003)
	– includes liabilities for the unfunded government employer retirement schemes (not covered in EDP and ESA 95)

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List of Abbreviations

CBRD	Croatian Bank for Reconstruction and Development
CBS	Central Bureau of Statistics
CNB	Croatian National Bank
CPF	Croatian Privatisation Fund
CPI	Consumer Price Index
DAB	State Agency for Deposit Insurance and Bank Rehabilitation
EC	European Commission
ECB	European Central Bank
ECOFIN	Economic and Financial Affairs Council
ECP	European Comparison Programme
EDP	Excessive Deficit Procedure
EEAICP	European Economic Area Index of Consumer Prices
EEC	European Economic Community
EEK	Estonian kroon
EICP	European Index of Consumer Prices
EMI	European Monetary Institute
EMU	Economic and Monetary Union
ERM II	Exchange Rate Mechanism II
ESA 95	European System of Accounts, 1995
ESCB	European System of Central Banks
EU	European Union
EU-10	10 new EU member states (Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, Slovenia)
EU-15	15 old EU member states (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom)
EU-25	all 25 EU member states (Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, United Kingdom)
GDP	Gross Domestic Product
GFS 2001	Government Finance Statistics Manual, 2001
HICP	Harmonised Indices of Consumer Prices
ISMA	International Securities Market Association
MUICP	Monetary Union Index of Consumer Prices
SGP	Stability and Growth Pact

EU Criteria with Special Emphasis on the Economic Convergence Criteria – Where is Croatia?

31

Country Abbreviations

AT	–	Austria
BE	–	Belgium
CY	–	Cyprus
CZ	–	Czech Republic
DE	–	Germany
DK	–	Denmark
EE	–	Estonia
EL	–	Greece
ES	–	Spain
FI	–	Finland
FR	–	France
HU	–	Hungary
IE	–	Ireland
IT	–	Italy
LT	–	Lithuania
LV	–	Latvia
LU	–	Luxembourg
MT	–	Malta
NL	–	Netherlands
PL	–	Poland
PT	–	Portugal
SE	–	Sweden
SI	–	Slovenia
SK	–	Slovakia
UK	–	United Kingdom

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