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REASSESSMENT OF THE «OPTIMUM CURRENCY AREA» THEORY IN THE EUROPEAN UNION

Abstract

The article offers a reassessment of the optimal currency area in the European Union and elaborates on the prospects for its expansion in the modern economic conditions. The assessment builds on the example of Central and Eastern European countries that have joined the euro zone in the recent years. The aim of the study is to compare the performance of the euro-zone countries with that of the non-euro-zone countries in order to determine whether the implementation of the common currency and centralized monetary policy helps to protect national economies from external shocks (balance-of-payments crises) better than keeping national currencies and pursuing independent monetary policy. This would, in turn, help to determine whether the optimum currency area in the European Union is still in existence today and whether it has potential to expand and generate benefits for its future members. The findings of the study prove that the euro zone remains to be an optimum currency area in the given borders with a potential for further expansion.

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Key words:

balance of payments; optimum currency area; exchange rate; adjustment policy; international economy; fiscal policy; monetary policy.

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13 figures, 6 tables, 17 references.

Problem Statement

An optimum currency area has been implicitly defined by Robert Mundell (1961) as a currency area for which the costs of relinquishing the exchange rate as an internal instrument of adjustment are outweighed by the benefits of adopting a single currency or a fixed exchange rate regime (Ricci, 1997, p. 5). According to Mundell (1961), different regions may achieve macroeconomic equilibrium, including external equilibrium, via implementation of a single currency within the boundaries of an optimum currency area, given that mobility of the factors of production, especially labour force, is high. Periodic balance-of-payments crises have become an integral element of the international economy because of the fixed exchange rates and inflexible prices and wages. The scientist believed that the existence of the optimum currency area with a single currency can prevent the occurrence of the balance-of-payments crises.

The introduction of a single currency, which should lead to creation of an optimum currency area, brings the following benefits for the member countries. *First of all*, a higher degree of capital mobility and mobility of the factors of production is reached. *Second*, bilateral trade between countries is boosted thanks to lower transaction costs. Many economists have shown that the presence of borders between countries decreases international trade by 30%, even in the absence of serious trade restrictions. This is explained by the fact that different countries have different currencies (Alesina et al., 2002). *Third*, the exchange

rate risks are minimized. We can also speak of more stable and homogenous financial markets, fiscal discipline, better access to broader centralized financing, etc. Moreover, there are so called «benefits of commitments». When a country adopts the common currency, it commits itself to following specific obligations, including fiscal and monetary discipline. In the case of the euro zone, these are the Maastricht criteria, which should be met should a country wish to join the euro zone. By complying with these criteria, the country can improve its fiscal discipline, reduce its government debt and budget deficit, and set smart goals for the macroeconomic policy.

Probably, the greatest disadvantage of a single currency area is the need for a country to abandon its independent monetary policy and follow a common stabilization policy. On the one hand, common stabilization policy may be more effective, merely because it provides access to a larger pool of resources. On the other hand, the country loses its monetary policy independence, which limits the country's ability to pursue its own economic goals. For example, the exchange rate cannot be used as a policy adjustment instrument, as it was normally the case in transition economies (Darvas, 2019). The country would not be able to devalue its national currency in order to reach a higher level of international competitiveness for its national economy, which might affect the country's economic development.

Currency unions can create disadvantages even for their most successful members. Some countries show no desire to abandon their independent, yet sometimes inefficient, monetary policies while receiving central stabilization financing, which leads to a situation when macroeconomic imbalances of some countries are financed by other countries. More stable and rich countries of the union are often forced to bear the costs of economic policy failures in their less successful neighbours. The price their societies pay for providing support to the existence and further expansion of the currency area may be too high, leading to political discussions about the necessity and the future of the currency area.

The efficiency of a single currency area should be evaluated from the standpoint of economic benefits that it brings to its members. The macroeconomic indicators demonstrated by the countries inside the area must be better than those demonstrated by the countries outside of it. In other words, the benefits of adopting a single currency must be higher than the costs of giving up an independent monetary policy. Special attention should be paid to balance-of-payments crises and the national economy's ability to respond to external shocks. Membership in the currency area should prevent balance-of-payments crises or at least mitigate their adverse effects for the national economy.

The aim of this study is to determine whether the common currency and centralized monetary policy can protect national economies from external shocks, based on the comparison of the economic performance of countries within the euro zone and that of the non-euro-zone countries that opted to keep their currencies and pursue independent monetary policies. Better performance

of the euro-zone countries would serve as a justification for the existence and further expansion of the optimum currency area in Europe. Should the results prove otherwise, the existing monetary mechanisms in the European Union will need to be reassessed.

Literature Review

Although some researchers regard Milton Friedman as one of the founders of the theory of optimum currency areas because he anticipated the basic tenets of optimal currency areas, Robert Mundell is considered to be the founder of this concept. In his work «A theory of optimum currency areas» (1961), Mundell put forward a definition of the optimum currency area and identified its main features and possible practical implications. The author studied the criteria that the countries must meet prior to linking their monetary policies and implementing a single currency within the scope of the currency area. For instance, the author believed that Western Europe was a region where such an optimum currency area could be established. According to Mundell, capital mobility was one of the crucial prerequisites for the existence of the optimum currency area. Such researchers as Ronald McKinnon and Peter B. Kenen continued the theoretical research of Robert Mundell. They paid significant attention to the problem of costs and benefits of optimum currency areas for their members. In fact, comparison of the costs and benefits of the optimum currency area is one of the central problems in this theory.

The main theoretical questions that are traditionally considered in the literature include the following:

- the preconditions for an optimum currency area;
- the costs and benefits of an optimum currency area;
- mobility of capital and other factors as one of the main preconditions for an optimum currency area;
- economic convergence within the borders of an optimum currency area;
- the problems of existence and further expansion of optimum currency areas.

The euro zone can be considered as a practical realization of the optimum currency area theory. In view of this, much attention has been paid to performance analysis of the euro-zone countries. Swoboda (1999), Buti & Gaspar (2021), Ricci (1997), and Alesina et al. (2002) studied the performance of the euro-zone countries as the realization of Mundell's optimum currency area concept. Such authors

as Darvas (2019) and Staehr (2015) studied the prospects for CEE countries' entry into the euro zone, as well as the potential benefits and costs associated with it. Such discussions among the researchers have been ongoing continuously in the context of the newly arising social, political and economic conditions.

Research Results

Macroeconomic Conditions in the CEE Countries

Robert Mundell believed that Western Europe was the region where an optimum currency area could be created. This is the region in which all the countries have gone a long way of political integration. The region has well-developed institutions, including regulatory authorities that can conduct effective common monetary and fiscal policies. These countries comply with the integral element of Mundell's optimum currency area – high mobility of the factors of production, especially labour (Swoboda, 1999). Mundell's idea of the optimum currency area in the European Union had been practically implemented in the form of the euro zone, which has already expanded beyond the borders of Western Europe.

The European debt crisis of 2009 provoked a debate among economists about the crisis of the euro zone as the optimum currency area and the chances for success with its further expansion. The crisis broke out when several euro-zone member countries, including Greece, Portugal, Ireland, Spain, and Cyprus, found themselves unable to either repay or refinance their government debts. They needed third-party help from other euro-zone members and the European Central Bank. The euro-zone crisis was caused by the balance-of-payments crisis aggravated by the countries' inability to devalue their national currencies, casting doubts on the validity of the very foundations of the optimum currency area – the requirement that countries abandon their independent monetary policies and refrain from using exchange rates as an adjustment policy instrument. Macroeconomic imbalances that originated prior to entry into the euro zone also added to the crisis. Fiscally distressed countries were given an opportunity to borrow money at low interest rates. As a result, not only have their debt problems worsened, but also spread to the entire euro zone (Amadeo, 2022).

There are two perspectives on the crisis of the optimum currency area. The first one points to potential inefficiency of the common monetary policy when helping the countries to avoid balance-of-payments crises. The second one posits that the criteria for the optimum currency area, including the Maastricht criteria, do not work, leading to imbalances inside the optimum currency area, whereby successful countries are forced to pay for the mistakes of their less dis-

ciplined peers. Among the reasons for the crisis, the following have been mentioned: Violations of fiscal discipline by some countries; large sovereign debts leading to persistent current account deficits in the periphery countries; consequences of the global financial crisis of 2008; the contemporary global pandemic and its economic outcomes.

Initially, a timeline for the creation of the European Union was divided into three stages. The first stage involved the elimination of all restrictions on free cross-border movement of capital. The second stage focused on achieving economic convergence and creating preconditions for the adoption of single currency. The final stage stipulated for the creation of an economic and monetary union and adoption of the single currency (European Central Bank, n.d.). In what concerns the currency union, two approaches were discussed within the EU. The representatives of France wanted that the currency union be created prior to establishment of the economic union. Experts from Germany advocated that economic convergence and harmonization be achieved first so that economic conditions in the prospective member countries could improve. Stable and rich economies did not want to finance current account deficits and government debts of other countries unless they implemented economic reforms. The same problem remains in the way of the monetary union's expansion today.

Currently, the European Union comprises 27 countries. The largest EU enlargement occurred in 2004 when ten countries joined the Union: Estonia, Lithuania, Latvia, Cyprus, Malta, Slovenia, Poland, Hungary, the Slovak Republic, and the Czech Republic. Out of these ten countries, eight represent Central and Eastern Europe (CEE). For our analysis, we selected seven CEE countries: Three Baltic states, including Latvia, Lithuania and Estonia, and four countries of the Visegrad Group, including Poland, Hungary, Czechia, and Slovakia. The analyzed period starts from 1995 so that it would be possible to compare these countries' development before and after their EU or euro-zone accession. For our analysis, we also selected macroeconomic indicators that characterize major macroeconomic spheres of these economies – employment, production, prices, and foreign economic activity.

Even though the Baltic States have demonstrated higher average rates of GDP growth, the overall economic situation in the countries of the Visegrad Group is better. The biggest problem for the Baltic States is that their unemployment and inflation levels are significantly higher than in the countries of the Visegrad Group. Both problems were caused by the transition period and hyperinflation in the past. The largest negative impact on economic development of these countries in the recent decades has been produced by the financial crisis of 1998, the global financial crisis of 2008, and the current world pandemic. Figure 1 demonstrates the influence of the 1998 and 2008 crises on the Baltic States' GDP. The highest GDP growth rates were observed over the period from 2000 to 2007, which can be explained by expectations of the EU accession, inflow of foreign direct investments and centralized support during the first years of membership in the Union.

Table 1

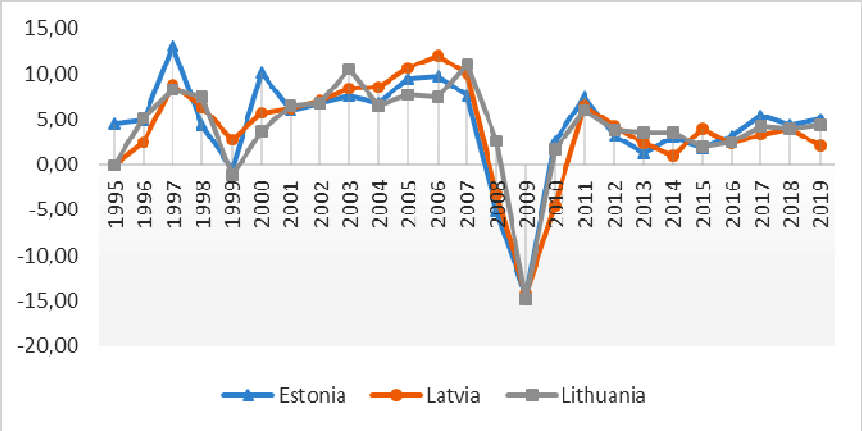
Macroeconomic indicators of the CEE countries

The Baltic states		
Indicator	Over 25-year period	As of 2019
Average rate of GDP growth, %	4.23	3.80
Average unemployment level, %	11.07	5.67
Average rate of inflation, %	5.32	2.47
Average GDP per capita, $	12 205.00	18 708.47
Average current account balance (in % to GDP)	-4.91	1.54
The Visegrad Group		
Indicator	Over 25-year period	As of 2019
Average rate of GDP growth, %	3.38	3.44
Average unemployment level, %	9.51	3.62
Average rate of inflation, %	5.06	2.77
Average GDP per capita, $	14 340 .83	20 059.78
Average current account balance (% to GDP)	-3.20	-0.67

Source: calculated by the author based on the data of World Bank (n.d.).

Figure 1

GDP growth rates in the Baltic States, %

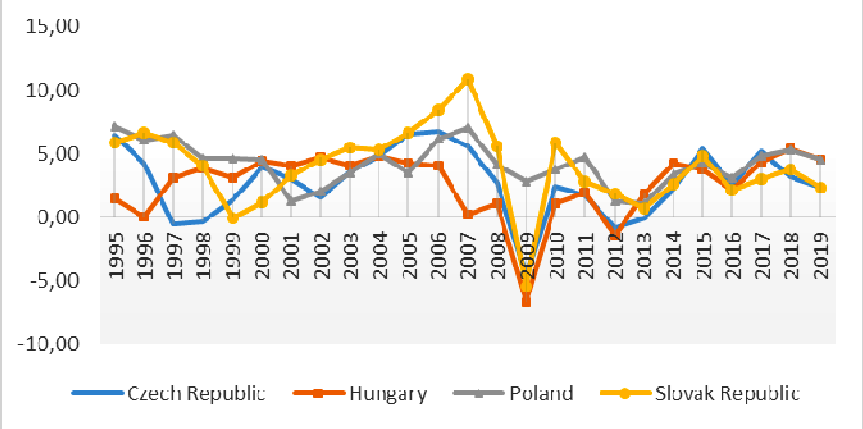


Source: calculated by the author based on the data of World Bank (n.d.).

The countries of the Visegrad Group have followed the path taken by the Baltic States. However, the negative economic consequences of past crises were less harsh. They were not seriously harmed by the financial crisis of 1998. Moreover, the decrease in GDP was not as severe as in the Baltic countries after the crisis of 2008. The countries have not yet managed to reach the pre-crisis rate of economic growth. On the other hand, their current average rates of economic growth are higher than in Estonia, Lithuania and Latvia. It is important to take this into account because most of these countries are not members of the euro zone.

Figure 2

GDP growth rates in the countries of the Visegrad Group, %



Source: calculated by the author based on the data of World Bank (n.d.).

It appears that major gains for the Slovak Republic occurred shortly after its accession to the European Union. Slovakia has lost some pace of development in the wake of its transition to market economy, but managed to catch up by 2003-2004 thanks to radical economic reforms, including the imposition of a single VAT rate; elimination of all tax exclusions; elimination of double taxation; implementation of fixed income tax; and elimination of all tax preferences (Aslund, 2013).

Comparison of the indicators observed in the pre- and post-accession period is the easiest way to perform a brief analysis of the impact of the countries' EU accession on their national economies.

Table 2

Comparison of main macroeconomic indicators of the CEE countries before and after their accession to the European Union

Baltic states			
Indicator	Before 2004	After 2004	Change, Δ
Average rate of GDP growth, %	6.09	3.27	-2.82
Average unemployment level, %	13.68	9.60	-4.08
Average rate of inflation, %	8.78	3.38	-5.40
Average GDP per capita, current US$	7 754.42	14 708.45	6 954.03
Average current account balance (% to GDP)	-7.10	-3.67	3.43
The Visegrad Group			
Indicator	Before 2004	After 2004	Change, Δ
Average rate of GDP growth, %	3.60	3.25	-0.35
Average unemployment level, %	11.08	8.62	-2.46
Average rate of inflation, %	9.50	2.56	-6.94
Average GDP per capita, current US$	10 785.09	16 340.93	5 555.84
Average current account balance (% to GDP)	-4.59	-2.42	2.17

Source: calculated by the author based on the data of World Bank (n.d.).

The EU accession had a positive impact on the economies of the CEE countries for several reasons. *First*, they joined the free trade area inside the EU, which provided an opportunity to expand their exports. *Second*, they received access to centralized financing inside the Union. *Third*, membership in the EU opened the doors for continuous flows of direct and portfolio foreign investments. *Finally*, their local businesses received an opportunity to enter solvent European markets, whereas European companies entered the markets of the CEE countries. Citizens of the CEE countries received access to new products, services and developed financial markets.

The Euro Zone as an Optimum Currency Area

As of 2020 the euro zone consists of 19 countries with a total GDP of $13,021.05 billion and a total population of 343 million (FocusEconomics, 2022). Over the last seven years, not a single country has joined the euro zone, which is the longest waiting period since its establishment. Bulgaria and Croatia will join

the euro zone in 2023 because they have met three out of four Maastricht criteria. Croatia declared its final decision to abandon its own currency and go in with the euro zone next year (Tamma & Treeck, 2022). All the European countries make their decision on joining the euro zone based on the benefits they might receive and the price they will have to pay. As it has been already mentioned, the overall success of the euro zone and economic well-being of its every member depend on the economic conditions in the other member countries. That is why potential members of the euro zone should meet the Maastricht criteria. Maastricht criteria are the convergence criteria that must be achieved by a country if it wants to become a member of the euro zone. The efficiency of the euro area and its potential for expansion can be partially evaluated in the context of meeting these criteria by the current and potential members. The EU countries have not been strictly following the Maastricht criteria during the recent years. Because of the global financial crisis and its consequences, fiscal discipline across Europe has been damaged. The pandemic of 2020 has also played a crucial role since the governments were forced to implement expansionary monetary and fiscal policies, leading to record levels of government debt and government deficit. Inflation has become a serious challenge for monetary authorities in Europe and it is going to pose serious problems in the nearest future because of the consequences of the global pandemic, global price increases, and due to the war in Ukraine in particular. In view of this, the criteria can hardly be met.

Table 3

Inflation rate and fiscal discipline in the European Union

	Inflation, HICP	Government debt, % of GDP	Government deficit / surplus, % of GDP
2012	2.2	90.972	-3.808
2013	0.8	92.96	-3.074
2014	-0.2	93.117	-2.489
2015	0.3	91.216	-1.997
2016	1.1	90.365	-1.477
2017	1.3	87.858	-0.938
2018	1.5	85.845	-0.447
2019	1.3	83.823	-0.664
2020	-0.3	97.276	-7.075
2021	5	95.646	-5.106

Source: Statistical Data Warehouse. (n.d.). All datasets [Interactive database]. European Central Bank. Retrieved May 2, 2022, from https://sdw.ecb.europa.eu/browse.do?node=9689727

Given that the current members of the euro zone do not follow the criteria, are the demands to comply with them justified when addressed to prospective members? If the criteria are not KPIs anymore – which indicators should be used to assess the degree of economic convergence between the countries inside an optimum currency area? Finally, the Maastricht criteria lay the foundations of the currency area. The inability to meet the criteria puts into question the very essence of the euro zone. In this case, either the criteria should be revised or the appropriate policy should be implemented to resolve the issue.

The potential members of the euro zone also struggle to meet the Maastricht criteria. The country's potential to join the euro zone and its compliance with the Maastricht criteria are evaluated in the so-called «convergence report» published annually by two institutions – the European Commission and the European Central Bank. According to the *European Convergence Report 2020*, Hungary and Czechia meet two out of four economic criteria necessary for adoption of the euro: The criteria on public finances and long-term interest rates. The countries do not fulfil the price stability and exchange rate criteria. Also, legislation in these countries is not fully compatible with the Treaty. Poland satisfies two out of four convergence criteria – the criteria on price stability and public finances. It is essential to understand that the situation with the Maastricht criteria is going to worsen in the upcoming years as the countries are recovering from the consequences of the global pandemic and due to other factors. In particular, it will be extremely difficult to maintain fiscal discipline in what concerns government debt and deficit, and the rate of inflation is going to overrun all the reference values (European Commission, 2020). As it can be noticed from the report, the biggest challenge for the potential euro-zone member countries is the exchange rate criterion. These countries are not yet ready to abandon their independent exchange rate policies.

It would be feasible to compare the rates of inflation and the degrees of fiscal discipline in the analyzed groups of euro-zone and non-euro-zone countries. The comparison will demonstrate how the differences in exchange rate regimes can affect inflation and whether membership in the Union guarantees a higher level of fiscal discipline.

The rates of inflation are comparable in both groups of countries, regardless of whether the country is a member of the euro zone or not. Therefore, the differences in exchange rate regimes and monetary policies do not have much impact on inflation. On the other hand, the countries of the euro zone demonstrate higher levels of fiscal discipline. The average levels of central government debt and government deficit are lower in the group of euro-zone countries. The requirement to meet the Maastricht criteria and the experience of the euro-zone debt crisis make these countries more restrained in the choice of their fiscal policies. As shows the experience of South European countries, it is essential to demonstrate fiscal discipline before joining the euro zone in order to prevent macroeconomic problems in the future.

Table 4

Inflation and fiscal discipline in the CEE countries

Inflation, %	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Czechia	1.02	1.47	1.92	3.29	1.44	0.34	0.31	0.68	2.45	2.15	2.85	3.16
Hungary	4.21	4.86	3.93	5.65	1.73	-0.23	-0.06	0.39	2.35	2.85	3.34	3.33
Poland	3.80	2.58	4.24	3.56	0.99	0.05	-0.87	-0.66	2.08	1.81	2.23	3.37
Slovakia	1.62	0.96	3.92	3.61	1.40	-0.08	-0.33	-0.52	1.31	2.51	2.66	1.94
Estonia	-0.08	2.97	4.98	3.93	2.78	-0.11	-0.49	0.15	3.42	3.44	2.28	-0.44
Latvia	3.53	-1.08	4.37	2.26	-0.03	0.62	0.17	0.14	2.93	2.53	2.81	0.22
Lithuania	4.45	1.32	4.13	3.09	1.05	0.10	-0.88	0.91	3.72	2.70	2.33	1.20
Central government debt, % of GDP	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Czechia	39.66	44.06	46.98	56.23	55.97	54.84	51.71	47.43	43.33	39.74	37.46	46.54
Hungary	84.88	86.03	95.10	98.38	97.16	100.58	98.80	98.66	93.21	86.86	84.08	97.36
Poland	57.18	61.68	62.18	65.55	66.45	71.44	70.21	73.01	68.72	66.76	63.37	77.33
Slovakia	44.04	48.54	51.32	60.95	65.37	67.99	66.39	67.77	65.52	63.33	63.03	78.74
Estonia	12.75	11.91	9.48	13.12	13.59	13.81	12.73	13.70	13.14	13.03	13.61	24.82
Latvia	42.19	53.98	51.45	49.15	46.23	51.24	46.59	50.30	47.61	46.30	47.51	55.39
Lithuania	34.18	45.47	45.70	51.23	47.99	52.63	53.41	50.94	47.07	40.82	44.54	55.45
Government deficit/surplus, % of GDP	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Czechia	-5.41	-4.15	-2.70	-3.90	-1.28	-2.08	-0.64	0.71	1.50	0.89	0.29	-5.78
Hungary	-4.75	-4.43	-5.21	-2.32	-2.60	-2.77	-2.00	-1.80	-2.46	-2.11	-2.09	-7.79
Poland	-7.25	-7.40	-4.97	-3.79	-4.23	-3.65	-2.60	-2.39	-1.49	-0.24	-0.74	-6.91
Slovakia	-8.15	-7.50	-4.32	-4.37	-2.89	-3.11	-2.67	-2.58	-0.98	-1.01	-1.30	-5.47
Estonia	-2.19	0.19	1.09	-0.29	0.18	0.71	0.11	-0.41	-0.48	-0.56	0.12	-5.60
Latvia	-9.54	-8.62	-4.29	-1.41	-1.22	-1.58	-1.43	0.02	-0.77	-0.84	-0.57	-4.47
Lithuania	-9.12	-6.90	-8.95	-3.17	-2.63	-0.60	-0.30	0.25	0.42	0.54	0.47	-7.28

Source: calculated by the author based on the data of World Bank (n.d.) and OECD (n.d.).

The analyzed countries can be divided into two groups – euro-zone member countries and non-euro-zone countries that opted to keep their national currencies. Slovakia, Estonia, Latvia, and Lithuania are euro-zone members. Slovakia was the only country of the Visegrad Group to join the euro zone in 2009. The Baltic countries were the last to join the euro zone (Estonia in 2011, Latvia in 2014 and Lithuania in 2015). Countries that are members of an optimum currency area cannot choose their exchange rate regime. Before entry into the euro zone, only Slovakia had a floating exchange rate regime. Estonia and Lithuania had currency boards, whereas Latvia used a narrow band. It was traditional for the CEE countries to move throughout their transition period from fixed exchange

rate regimes (when the exchange rate was used as a nominal anchor) to floating regimes. This was explained by hyperinflation in the wake of their transition to market economy. The Baltic States used fixed exchange rates as an instrument to keep their inflation rates at moderate levels. The introduction of national currencies, as well as the use of special drawing rights and currency board arrangements, allowed these countries to redirect their trade towards western markets and attract foreign direct investment from the European countries. Estonia implemented the currency board regime in 1992 and so did Lithuania in 1995, whereas Latvia introduced a conventional fixed peg in 1994. The next step was to link their national currencies to the euro. Estonia did this in 1999, followed by Lithuania in 2002 and Latvia in 2005. Thus, the introduction of the euro did not change much in these countries' national economies since they had already been operating with fixed exchange rates against the euro (Staehr, 2015).

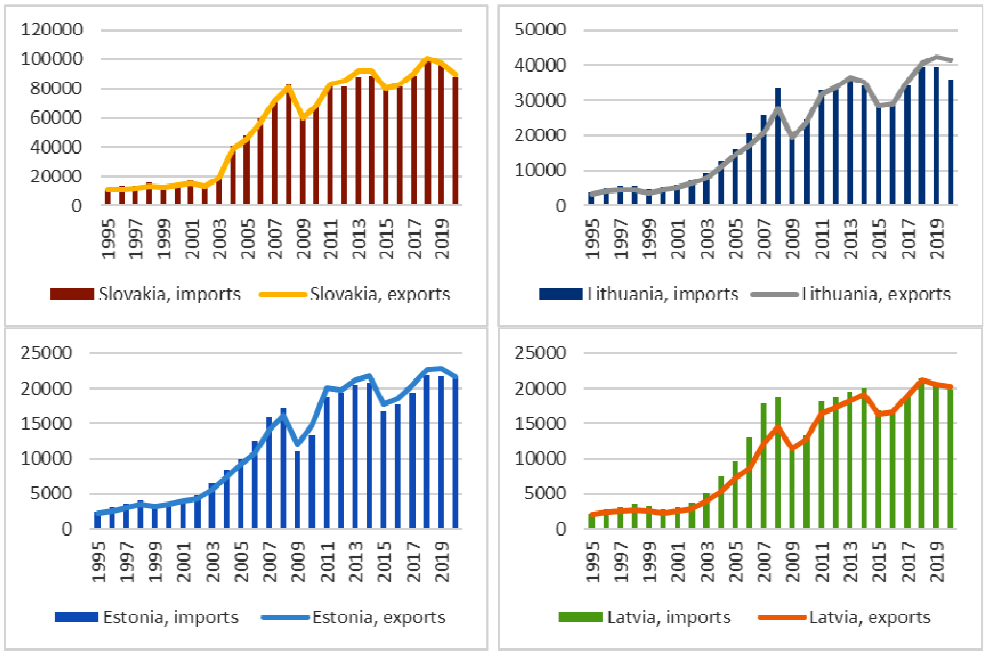
Slovakia had a floating exchange rate regime before it joined the ERM II mechanism. After joining the mechanism, its national currency continued to appreciate nominally. The conversion rate of Slovakia's national currency was fixed to the euro in summer 2008, before the global financial crisis has started. Central European currencies were at historically high levels against the euro in those days. Because Slovakian koruna was fixed to the euro, it managed to escape the massive depreciation that happened with the Czech koruna, the Hungarian forint, and the Polish zloty (Darvas, 2019, p. 7).

Had the exchange rates had much significance, the non-euro-zone Central European countries would have performed better economically than Slovakia after the global financial crisis of 2008, when the floating currencies have undergone massive depreciation, but this, however, never happened. In fact, Slovakia was one of the best performers in terms of economic growth after 2008. Its economy has grown by 29.7% from 2008 to 2019, having outperformed Czechia (which has grown by 19.4% in the same period) and Hungary (growth of 20.1%), except for Poland that has grown by 46.3% over the same period. The employment rate has been rising very rapidly in Slovakia after 2013, similar to other Central European countries, so that its rate in 2019 was higher than in Poland and Romania, but lower than in Czechia and Hungary. Apparently, the lack of independent exchange rate and monetary policy in Slovakia did not hinder its positive economic developments. On the other hand, Hungary has had a flexible exchange-rate regime both before and after 2008, but because there had been unsustainable macroeconomic developments before 2008, its growth after 2008 has been relatively weak compared to other countries in the region. A lot of problems in the CEE countries were associated with weak fiscal discipline and overall fiscal problems. Independent currency and floating exchange rate regime were not inevitable solutions to their economic problems. This means that floating the national currency's exchange rate can neither provide a better response to a global financial crisis nor prevent a balance-of-payments crisis (Darvas, 2019, p. 9).

A balance of payments can be analyzed in a narrow sense – as the state of the current account or in a broad sense – as a sum of the current account, capital account and financial account. The Baltic States have faced a decline in their current account after their accession to the EU in 2004. The decline in the current account has become possible because imports have grown faster than exports after joining the European Union. The income of these countries has grown after their entry into the EU, partially thanks to growth in foreign direct and portfolio investments. It has increased the demand for imports, leading to falling current accounts in these countries. Therefore, the income effect was greater than growth of countries' exports. The best situation was in Slovakia, where exports exceeded imports after joining the EU, and the country's current account started to improve.

Figures 3-6

Exports/imports in Slovakia, Lithuania, Estonia, and Latvia, million USD

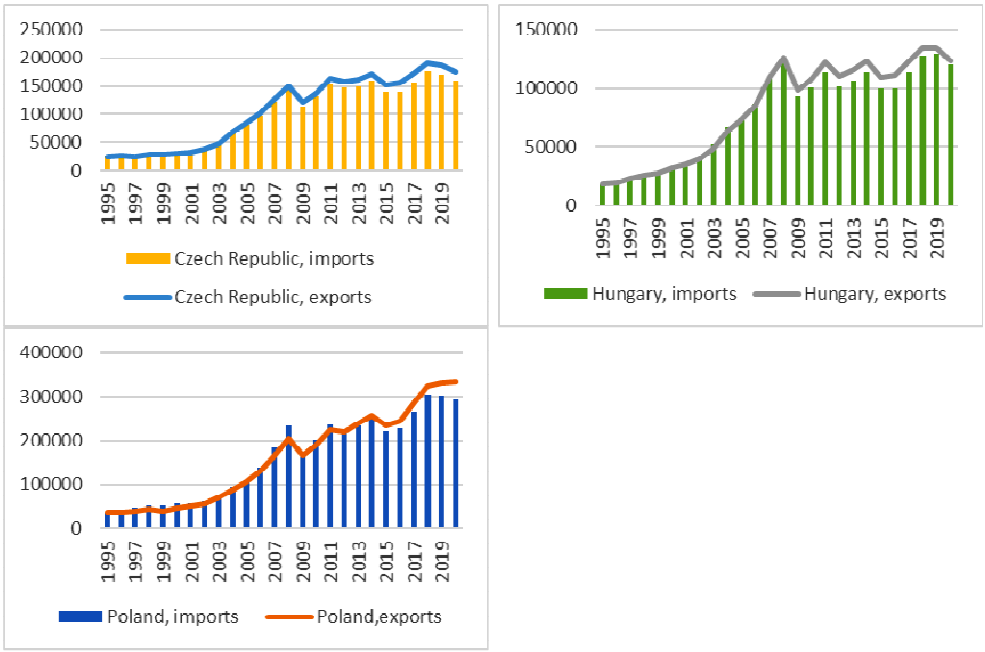


Source: International Monetary Fund. (n.d.) *IMF Data Warehouse* [interactive database]. Retrieved May 01, 2022, from https://data.imf.org/regular.aspx?key=62805740

The other countries of the Visegrad Group (Poland, Hungary and Czechia) have not faced the problem like the one the Baltic countries did. Their export revenues exceeded import expenditures, so that their current accounts (in % of GDP) have started to improve since the EU's expansion in 2004.

Figures 7-9

Exports/imports in the Czech Republic, Hungary and Poland, million USD

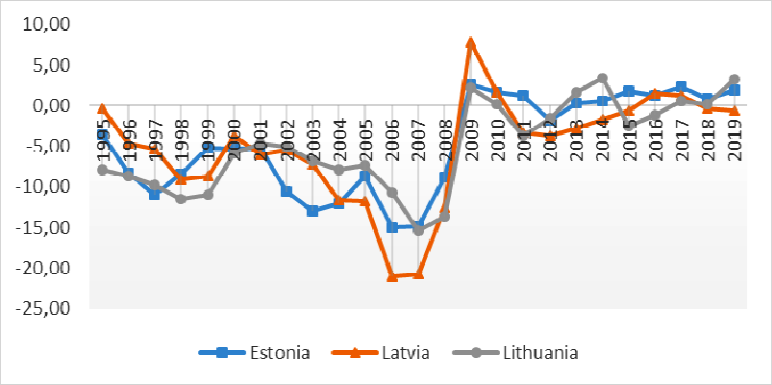


Source: International Monetary Fund. (n.d.) *IMF Data Warehouse* [interactive database]. Retrieved May 01, 2022, from https://data.imf.org/regular.aspx?key=62805740

Generally, all the countries of the euro zone have been demonstrating steady growth in their current account balances after joining the euro area. This is explained by overall growth in bilateral trade between the euro-zone countries due to introduction of a single currency. As it has been already mentioned, the presence of the single currency lowered the transaction costs of trade and boosted its total turnover. However, it would not be justified to claim that membership in the optimum currency area can improve the country's current account. The data on current account dynamics in the countries under consideration are shown in Figure 10.

Figure 10

Dynamics of the current account balance in the Baltic States, in % of GDP



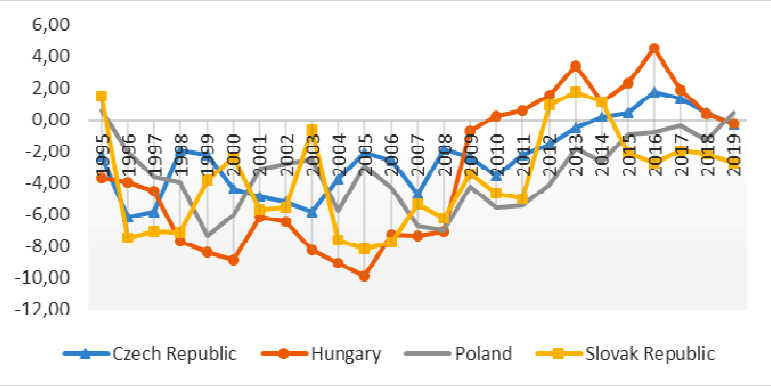
Source: calculated by the author based on the data of World Bank (n.d.).

The Baltic States have traditionally been net importers. Their accession into the European Union has further worsened their current accounts. Their current account balances had been improving prior to global financial crisis of 2008. After the crisis, they have reached positive values at the expense of reduced imports due to economic recession. This recession has also provoked a decrease in consumption and investment, resulting in better current account positions. This can hardly be explained by the overall policy of the EU. After joining the euro zone, these countries have not demonstrated any significant improvements in their current account balances, except for Lithuania. A similar situation was observed in the countries of the Visegrad Group: Hungary, Poland and Czechia have demonstrated steady improvements in their current account balances since 2008. Over the last five years, however, their current account balances have worsened again.

It is not only the current account, but also other BOP components that determine whether a country would face a balance-of-payments crisis. Moreover, the negative balance of the current account can be beneficial for the national economy at some stages of its economic development. Fluctuations in the current account may be compensated through capital account or financial account of the balance of payments. The experience of the CEE countries proves that the capital and financial accounts may produce a crucial impact on the overall balance of payments. The balance-of-payments analysis for the CEE countries over the last several years is shown in Table 5 and Table 6.

Figure 11

Dynamics of the current account balance in the countries of the Visegrad Group, in % of GDP



Source: calculated by the author based on the data of World Bank (n.d.).

The euro-zone countries have not been facing any balance-of-payments crises, be they defined in narrow or broad terms. Slovakia has a steady negative current account, but it is compensated by the growing capital account and adequate financial account. The only exception is Latvia, where financial account plays a crucial role in external imbalance. However, the situation tends to improve. The state of the countries' balances of payments proves that the financial account, which is mainly defined by foreign direct and portfolio investments, can play a crucial role. This factor is important, since participation in the EU or the euro zone means growing inflows of foreign direct and portfolio investments into the national economy.

Table 5

Balance of payments in the euro-zone countries, million USD

Indicator	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
	Estonia											
CA	526	340	304	-432	75	173	403	301	622	280	616	-392
CapAc	691	670	942	789	651	289	471	258	257	402	382	455
FA	1283	2145	1403	568	577	220	1030	287	928	314	454	-324
BOP	-66	-1135	-156	-210	149	242	-156	272	-50	368	543	387

Indicator	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
	Latvia											
CA	2057	414	-944	-1051	-841	-533	-169	439	399	-99	-223	1005
CapAc	625	471	601	828	763	920	767	334	305	609	505	586
FA	1515	312	1064	-670	-215	1303	332	848	-404	1155	470	1731
BOP	1168	573	-1407	477	137	-916	265	-75	1101	-645	-188	-140
	Lithuania											
CA	842	73	-1592	-686	791	1653	-1014	-474	304	131	1817	4700
CapAc	1639	1412	1472	1274	1494	1307	1268	651	610	873	1015	1147
FA	3121	470	-1813	436	1840	-649	2396	-1250	-911	-95	2747	4848
BOP	-640	1015	1693	153	445	3609	-2142	1426	1826	1099	85	999
	Slovakia											
CA	-3021	-4210	-4909	889	1797	1199	-1849	-2433	-1854	-2293	-2842	-294
CapAc	656	1392	1243	1814	1422	937	2854	1543	113	990	747	1217
FA	-3143	-3176	-4733	429	-808	-908	-778	-1725	-3630	-4273	-2793	-157
BOP	779	358	1067	2274	4028	3045	1783	835	1889	2970	698	1079

Note: CA – current account, CapAc – capital account, FA – financial account, BOP – balance of payments.
Source: International Monetary Fund. (n.d.) *IMF Data Warehouse* [interactive database]. Retrieved May 01, 2022, from https://data.imf.org/regular.aspx?key=62805740.

Table 6

Balance of payments in the non-euro zone countries, $ million

Indicator	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
	Czechia											
CA	-4870	-7351	-5020	-3159	-1106	458	845	3463	2961	1260	898	8845
CapAc	2727	1953	683	2720	4216	1572	4012	2132	2016	565	1062	3056
FA	-8522	-8521	-3451	-3516	-6075	-394	-7286	-18027	-44767	762	-4372	8579
BOP	6379	3123	-887	3077	9185	2423	12143	23622	49743	1063	6332	3322
	Poland											
CA	-18562	-26660	-28346	-20193	-9465	-14212	-4347	-3719	-1960	-7530	2931	21067
CapAc	7040	8611	10016	10958	11964	13305	11331	4867	6795	12148	11757	14478
FA	-34826	-46106	-33559	-22673	-7076	-6870	-464	-21274	5118	-5923	-1423	6752
BOP	23304	28057	15229	13438	9575	5963	7448	22422	-283	10541	16111	28793
	Hungary											
CA	-892	342	887	1990	4666	1605	2926	5855	2769	636	-620	167
CapAc	2286	2382	3324	3283	5146	5077	5686	-20	1203	3615	3007	3144
FA	-4061	-2809	-4795	5132	-75	4480	12669	10765	1861	-3037	250	-6633
BOP	5454	5532	9005	141	9887	2202	-4058	-4929	2111	7289	2137	9944

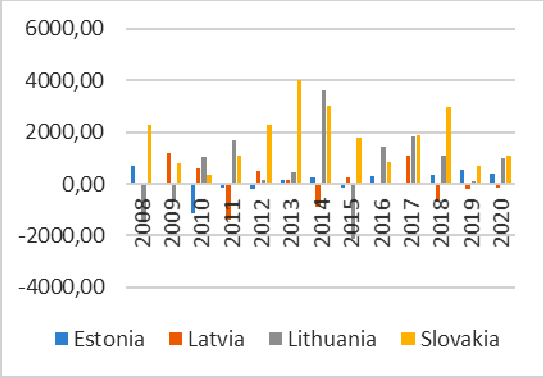
Note: CA – current account, CapAc – capital account, FA – financial account, BOP – balance of payments.
Source: International Monetary Fund. (n.d.) *IMF Data Warehouse* [interactive database]. Retrieved May 01, 2022, from https://data.imf.org/regular.aspx?key=62805740.

The non-euro-zone countries have not experienced any balance-of-payments crises over the recent years as well. Czechia has a massive surplus in the balance of payments due to both positive current account and a tremendous surplus in its financial account. Poland also demonstrates a considerable surplus in the balance of payments -- its current account has been volatile recently, but its capital account has been characterized by large surpluses. The current account of Hungary is positive, but tends to decline. The capital account is stable and high. The overall balance of payments has been traditionally in surplus, except for the years 2015 and 2016.

Therefore, both groups of countries do not show signs of the balance-of-payments crisis. The situation in the Visegrad Group seems to be even better. The question is whether it is due to monetary policy and independent currency or due to other factors.

Figure 12

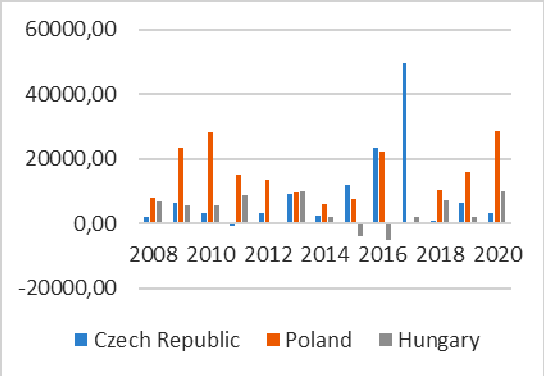
BOPs in the euro-zone countries, million USD



Source: International Monetary Fund. (n.d.) *IMF Data Warehouse* [interactive database]. Retrieved May 01, 2022, from https://data.imf.org/regular.aspx?key=62805740

Figure 13

BOPs in the non-euro-zone countries, million USD



Source: International Monetary Fund. (n.d.) *IMF Data Warehouse* [interactive database]. Retrieved May 01, 2022, from https://data.imf.org/regular.aspx?key=62805740

Prospects for Further Expansion of the Euro Zone

Generally speaking, both groups of countries are not facing the problem of the balance-of-payments crisis at the present. Permutations of their current accounts are often compensated by the financial and capital accounts. The inflows of foreign direct and portfolio investments do not critically depend on the countries' membership in the single currency area, but are rather determined by the countries' production possibilities and overall potential of their national economies. Czechia, a non-euro-zone country, has received more investments than all of the Baltic States that adopted the euro. The exchange rate regimes also do not really matter in the external equilibrium context. It would make more sense saying that fiscal discipline plays a more important role than an independent exchange rate regime. The experience of South European countries has proven this thesis.

Both groups of countries have not been seriously harmed by the euro-zone debt crisis that started in 2009. However, this crisis has become a serious problem for the South European countries and a challenge for the entire euro zone, giving grounds for claims that the euro zone was in crisis as an optimum currency area. It is important that prospective members of the euro area learn the lesson of South European countries. The potential members of the currency union will evaluate their decision on joining the union based on the area's ability to

overcome the crisis and to avoid such imbalances in the future. The euro zone itself must learn the lessons of the debt crisis to guarantee its stable development and further expansion.

South European countries like Spain, Portugal, Italy, Greece, and Cyprus still experience negative economic consequences of the 2008 global financial crisis. Their experience shows that complying with the Maastricht criteria at the moment of joining the euro zone does not prevent potential problems in the future. Fiscal discipline is the crucial factor of macroeconomic stability in both a separate country and the whole euro zone. Fiscal imbalances (high levels of central government debt and government deficit) prior to entry into the euro zone may eliminate all the positive effects from joining the area. Access to cheap financial resources after joining the euro area may only aggravate fiscal problems in some countries.

The experience of the Baltic States has proven the critical role of fiscal discipline for successful integration into the euro zone. Before their entry into the euro area, the current account deficits, rates of inflation and credit growth in the Baltic States were higher than in their South European peers. However, thanks to fiscal discipline, these countries managed to avoid a deep debt crisis. Gross public debt levels as a share of GDP in 2007 were very low in the Baltic countries – 4% in Estonia, 8% in Latvia and 16% in Lithuania – having provided fiscal buffers (Darvas 2019, p. 10).

Expectations of economic agents are also a very important factor of successful integration into the euro zone. Expectations in the Baltic States and Slovakia showed confidence in their governments' macroeconomic policies before entry into the euro zone. It allowed them to implement proper fiscal and monetary policies, which pursued the goals of financial stability and fiscal discipline. In turn, the citizens of South European countries traditionally doubted the idea of joining the euro area. As a result, the efficiency of implemented macroeconomic policy was reduced.

The prospects of the euro zone as an optimum currency area will depend on its ability to guarantee stability inside the euro area and, to a lesser extent, ensure the possibilities for its expansion. The euro zone institutions should ensure that the Maastricht criteria – especially those related to fiscal discipline – are being met by its members. The criteria should perhaps be made more flexible under the conditions of economic volatility. The prospective euro-zone members should be strictly evaluated in what concerns their fiscal discipline in order to avoid repeating the negative lessons of South Europe. For example, Hungary had high central government debt of almost 90% and government deficit of almost 8% of GDP in 2020. If the country decides to join the euro zone, it must address the factors that cause fiscal problems and implement a proper macroeconomic policy.

The loss of monetary policy independence is the greatest disadvantage of joining the euro zone. According to some economists, the potential costs of abandoning the independent monetary policy may not be very high in the case of developing countries. Such countries do not properly use their monetary policies as a stabilization device. Usually, such policies are pro-cyclical in nature. The analysed non-euro-zone countries (Poland, Hungary and Czechia) use floating exchange rate regimes (Alesina et al., 2002).

Conclusions

In conclusion, we can assert that participation of the country in the currency union that can be considered as the optimum currency area brings more benefits than potential drawbacks for a country. The loss of independent monetary policy is not that serious a challenge for the developing countries compared to potential benefits of adopting a single currency. The experience of Slovakia also shows that abandoning an independent floating exchange rate regime is not critical. The greatest incentives for a country to join the euro zone are the growth of trade turnover and the so-called «benefits of commitments». Prospective and actual members of the euro zone have significant chances to reach higher levels of fiscal discipline. On the other hand, the lack of fiscal discipline can deprive the country of the potential benefits of joining a single currency area. Moreover, the optimum currency area will also suffer because of this factor.

Both groups of analysed countries have not experienced any balance-of-payments crises in the recent years. It means that the euro zone is efficient enough to protect its members from fluctuations in external economic conditions. Alongside with all the mentioned benefits, this makes this currency area attractive for other potential members. The political factors and overall economic situation in the region may become obstacles.

The euro zone as an optimum currency area has a definite potential for expansion. Such expansion should be favourable for both prospective members and the euro zone itself. The lessons of South European countries show that fiscal discipline is the most important Maastricht criterion that must be met before entry into the currency union can be possible. The Maastricht criteria are generally not being met even by the current members of the union. They will have hard time meeting them in the nearest future as well. The Maastricht criteria should probably be revised taking into account the new conditions in the international economy. Finally, it is vitally important to form proper expectations among national economic agents in order to raise the effectiveness of the pursued monetary and fiscal policies.

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