Nominal Convergence – Are We Getting Closer?

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Abstract

All countries that joined the European Union are obligated to adopt the euro currency, except for Denmark that benefits from an opt-out clause. Presently, there are eight EU Member states that are not part of the euro zone: Bulgaria, Croatia, Czechia, Denmark, Hungary, Poland, Romania, and Sweden.

The national authorities are free to choose the time of accession and this prerogative allows some states to postpone by not entering the ERM II mechanism. But there are also countries who are severely struggling to meet the economic convergence levels.

The degree of economic convergence is analyzed by the European Commission through Flash Eurobarometer surveys every two years.

The purpose of this paper is to compare the 2018 Eurobarometer results with our own findings from December 2019, for a total of four countries: Romania, Poland, Hungary, and the Czech Republic.

Key words: Eurozone, nominal convergence, Maastricht criteria
J.E.L. classification: F15, F36, O57, E58

1. Introduction

In order for a country to be accepted into the euro zone, there are four criteria that need to be met to prove that a high level of sustainable economic convergence was reached. The criteria are presented under the Maastricht Treaty and mainly refer to HIPC inflation, government budget deficit, government debt-to-GDP ratio, exchange rate stability and long-term interest rates.

The Convergence Reports published at least every two years help the Council of the EU decide if a Member State fulfils all the conditions for joining the euro area. This report also assesses if the national legislation is compatible with the European and Monetary Union rules.

The countries chosen for our comparative analysis are Romania, Poland, Hungary, and the Czech Republic. Our interest is to compare the results provided by the last Convergence Report (dated May 2018) and our results for December 2019. This necessity stand from the fact that the issuing of the 2020 Convergence Report has been delayed.

The new Member states can choose between different monetary policy strategies, allowing them to implement inflation targeting (Czech Republic, Hungary, Poland, and Romania) or exchange rate targeting (Bulgaria and the Baltic countries). Because Bulgaria opted for a monetary council and Croatia already benefits from a 90% euroization degree, we consider that the most economically relevant candidates for our comparative analysis with Romania are Poland, Hungary, and Czech Republic.

2. Theoretical background

The Convergence Report issued by the European Commission is independent from the one issued by the European Central Bank, but they are published at the same time, according to the Article 140 from the Treaty of the Functioning of the European Union (TFEU). They are released at least every two years or even more often if there is a special request from a Eurozone candidate.

The above-mentioned Article regulates the content of Convergence Reports and enforces the obligation to include an analysis of the compatibility of national legislation with Articles 130 and 131 from TFEU and with the Statute of the European System of Central Banks (ESCB) and the European Central Bank (ECB).

The EU Council decides whether the criteria from Protocol Number 13 regarding the single currency adoption is met by determining if the candidates have succeeded in achieving the mandatory level of sustainable economic convergence.

However, assessing the progress of economic convergence is also dependent on the quality and the integrity of the statistical data provided. Therefore, it is critical to have independent national statistical institutes that can be held accountable for their actions.

A typical analytical framework used to assess the degree of economic convergence is presented in Table 1. The sustainability of economic convergence is of great interest given that the candidates need to maintain the fulfillment of the criteria even after the acceptance in the Euro Zone.

Table no. 1 Convergence criteria

What is measured	How it is measured	Convergence criteria
Price stability	Harmonized consumer price inflation	Long-term price stability and average inflation rate, one year before the analysis, no more than 1.5 percentage points above the rate of the top three Member States.
Sound and sustainable public finances	Government deficit and debt	Cannot be under excessive deficit procedure at the time of the examination.
Exchange rate stability	Exchange rate developments in ERM II	Minimum two years of participation in ERM II without severe tensions.
Durability of convergence	Long-term interest rate	Not more than two percentage points above the rate of the top three Member States in terms of price stability.

Source: (Own computation based on European Commission information)

There are numerous studies including empirical evidence regarding the Maastricht convergence criteria. Haug (Haug, et. Al, 2000) used cointegration methods in order to find out which EU members could create an optimal monetary union based on the nominal convergence criteria. The findings indicate that, if important changes are not carried through by some of the EU initial countries, the union will not prosper.

Another study (Koukouritakis and Michelis, 2003) looked at the most recent countries who joined the EU, taking into account the nominal convergence criteria, as well as the real convergence GDP per capita criterion. The analysis concluded that most of the countries proved to be prepared to join the eurozone, but still needed to implement policy changes in order to successfully join the European Monetary Union.

A similar paper (Kutlu and Kavrukkoca, 2007) investigates the macroeconomic condition for Turkey, Croatia, Bulgaria, and Romania in order to determine which of the candidates form a successful EMU. As none of the countries met the nominal criteria, the recommendation was to implement changes in their monetary and fiscal policies.

3. Research methodology

The research was based on quantitative data, as well as qualitative data. The qualitative data was analyzed and then summarized in the literature review section, while the quantitative data was gathered from the Convergence Reports issued by the European Commission and from the Eurostat Database. The quantitative data was then entered in Excel and, for better visualization purposes,

included in graphs. In order to compare the results registered in Romania, Hungary, Poland and the Czech Republic, we have included a comparative analysis.

4. Findings

The Maastricht Convergence Criteria refer to price stability, sound and sustainable public finances, exchange rate stability and durability of convergence. In this section, we have analyzed the convergence levels for Romania, Poland, Hungary and Czech Republic and compared them to the results presented in the latest Convergence Report issued in 2018. It is of great importance to constantly evaluate the degree of criterion fulfillment and to implement policy and measures aimed at achieving them in a durable way.

4.1 Price Stability

According to Article 140 from TFEU, "the achievement of a high degree of price stability results from an inflation rate close to the rate of the top three performing Member States." In Article 1 from Protocol Number 13 on the Convergence Criteria this criterion is further analyzed mentioning that "we can consider that a Member State has a long-lasting price stability and an average inflation rate if for one year before the assessment, its inflation rate does not exceed by more than 1.5 percentage point the rate of the top three Member States. The inflation rate is calculated based on the consumer price index on a comparable basis, while taking into consideration the existing differences between national definitions."

A Member State's inflation outcomes are analyzed in relative terms, since common shocks can lead to a temporary shift in inflation rates from targets set by central banks. Ideally, in order to fulfill the sustainability requirement, the favorable progression of the inflation rate should mainly be an outcome of the evolution of production costs and other factors that have a structural influence on the price stability, and not a consequence of temporary factors.

The 2018 Convergence Report uses an inflation benchmark of 1.9 percentage points, based on the inflation registered in the best performing countries: Cyprus, Ireland, and Finland. According to Eurostat, in March 2018 the 12-month average inflation rate was: 0.2% in Cyprus, 0.3% in Ireland, and 0.8% in Finland, resulting in an average inflation rate of 0.4%. By adding the 1.5 percentage points allowed on top of the average value we obtain the reference value of 1.9%.

Table no.2 HICP inflation rates for top 3 performers in March 2018

GEO/TIME	2018M03
Cyprus	0.2
Ireland	0.3
Finland	0.8

Source: (Own computation based on data from Eurostat database)

As per our analysis, in December 2019, best inflation performance was registered in Portugal, Cyprus and Greece, and average rate for these top performers is 0.4%. If we add the 1.5 percentage points allowed, we obtain a reference value of 1.9%, identical to that of March 2018.

Table no.3 HICP inflation rates for top 3 performers in December 2019

GEO/TIME	2019M12
Portugal	0.3
Cyprus	0.5
Greece	0.5

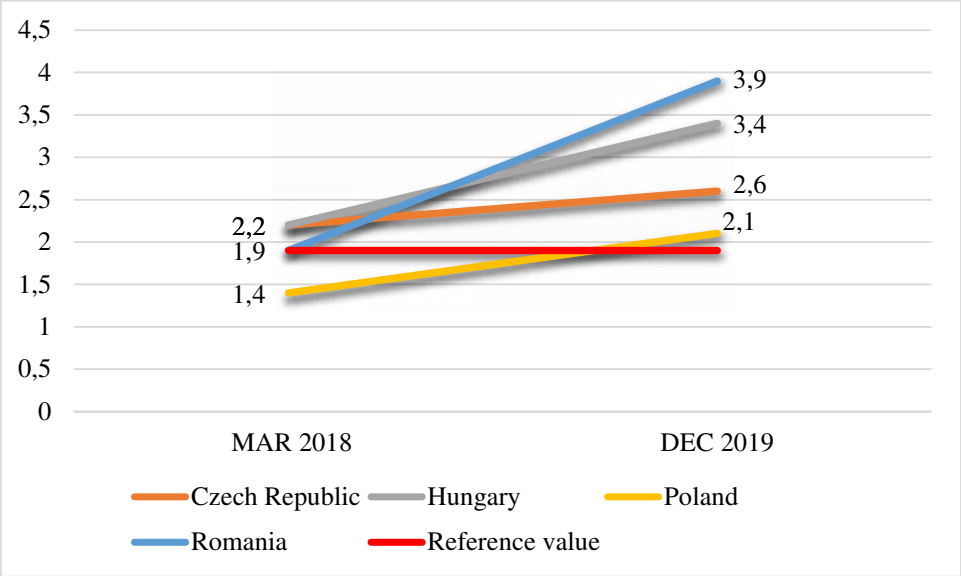
Source: (Own computation based on data from Eurostat database)

With regards to the price stability criterion, the average annual inflation rate in December 2019 was higher than the reference value of 1.9% in all the countries analyzed. This represents a deterioration of the situation, considering that in March 2018, only the Czech Republic and Hungary recorded inflation rates above the reference value.

The upward price trend occurred amid a period of economic growth and increasing energy and commodity prices. The economies of Central and Eastern Europe were impacted significantly by the global evolution of the commodity prices, due to the high share of the components energy products and food in the HICP basket.

An environment that encourages long-term price stability can be achieved through the implantation of stability-oriented economic policies, structural reforms and measures aimed at maintaining financial stability, as well as improving supervisory practices.

Figure no. 1. HICP Inflation rate comparison between March 2018 and December 2019



Source: (Own computation in Excel)

4.2 Sound and sustainable public finances

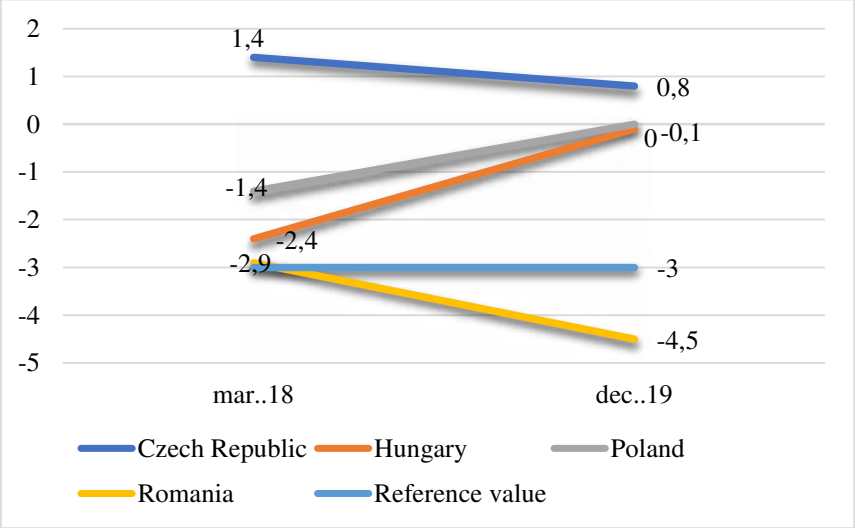
According to Article 140 from TFEU, this criterion represents the reliability of public finances and it results from a budgetary situation without excessive public deficit, as defined under Article 126.

If the Member State does not meet the requirements of fiscal discipline, the European Commission will assemble a report, especially when:

- The ratio between the planned or actual government deficit and gross domestic product exceeds a reference value (3% of GDP). This no longer apply if this ratio has depreciated significantly and steadily, until reaching a level close to the reference value or if exceeding the reference value is exceptional and only temporary.
- The ratio between government debt and gross domestic product exceeds a reference value (60% of GDP), unless it is decreasing and approaching the reference value.

Currently, none of the analyzed countries are subject to an excessive deficit procedure. In March 2018, all the countries met the government deficit criterion. In December 2019, Romania was the only country that no longer met this requirement. It is necessary that all the candidates achieve and maintain strong and sustainable fiscal positions. Due to Romania's latest performance, the country could be subjected to an excessive deficit procedure in the near future, but this decision will be announced in the next Convergence Report.

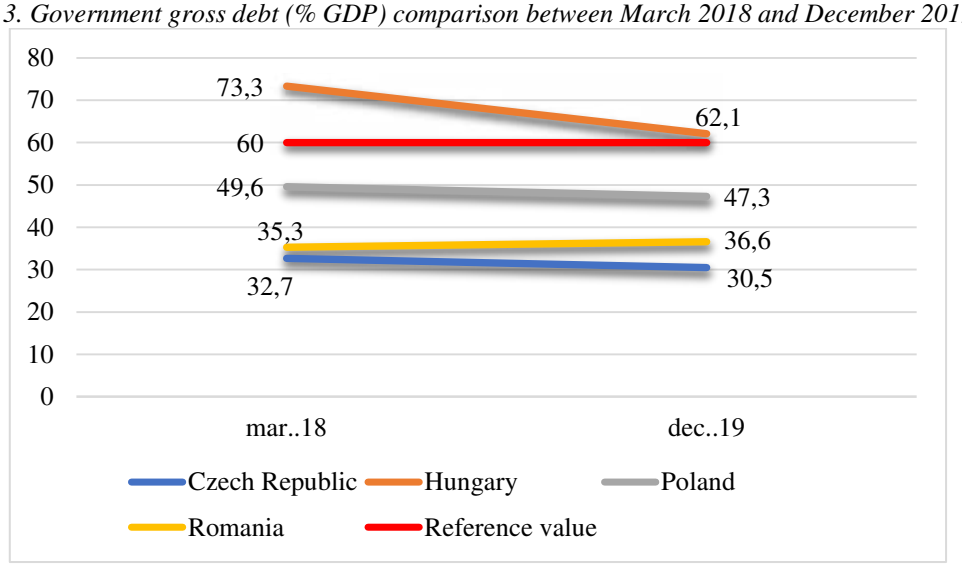
Figure no. 2. Government deficit(-)/surplus(+) (% of GDP) comparison between March 2018 and December 2019 ()



Source: (Own computation in Excel)

The government consolidated gross debt criterion had not been met only by Hungary, neither in March 2018 nor December 2019, as the ratio of its public debt in GDP exceeded 60 percentage points.

Figure no. 3. Government gross debt (% GDP) comparison between March 2018 and December 2019



Source: (Own computation in Excel)

4.3 Exchange rate stability

According to Article 140 from TFEU, this criterion assumes "compliance with the normal fluctuation limits provided by the Exchange Rate Mechanism of the European Monetary System (EMS) for at least two years, avoiding devaluation of national currency against the euro."

Further details are included in Protocol Number 13, stating that: "The criterion for participation in the exchange rate mechanism of the European Monetary System means that a Member State has been in compliance with the established normal fluctuation margins, without any tensions, for at least two years prior to the assessment. Moreover, the Member State did not purposely devaluate his national bilateral central exchange rate against the euro during the same time period."

While analyzing the fulfillment of this criterion, the Commission also takes into account additional factors, such as the evolution of foreign exchange reserves, short – term interest rates, the role of policy measures, and interventions on the foreign exchange market aimed at maintaining exchange rate stability.

In order to participate in MCS II mechanism, all the participants must give their consent. The participants in ERM II include the euro area finance ministers, the ECB, as well as finance ministers and central banks outside the euro area that are participating in ERM II.

With regards to the exchange rate criterion, none of the national currencies from the analyzed countries participate in the ERM II. In March 2018, the Czech koruna and Polish zloty appreciated against the euro. The situation in December 2019 is not as promising, as all the currencies have depreciated against the euro.

The countries selected for our study use an exchange rate floating regime that allows Central Banks to intervene on the foreign exchange market, an instrument which they used to their advantage between March 2018 and December 2019.

4.4 Durability of convergence

According to Article 140 from TFUE, "the sustainable nature of the convergence level achieved by the Member State shall be reflected in the level of long-term interest rates." Protocol Number 13 states that "in order to meet the convergence criterion of interest rates in terms of price stability, one year before the examination, the candidate must record an average long-term nominal interest rate that does not surpass the rate of the top three Member States by more than two percentage points."

In the 2018 Convergence Report, the interest rate reference value was calculated at 3.2%. In March 2018, the three countries that obtained the best performance in the field of price stability are Cyprus (2.2%), Ireland (0.8%), and Finland (0.6%). Based on these values we calculate an average of 1.2%. By adding the two agreed percentage points to this average, we set a reference value of 3.2%.

Table no.4 Interest rates for top 3 performers in March 2018

GEO/TIME	2017 M04	2017 M05	2017 M06	2017 M07	2017 M08	2017 M09	2017 M10	2017 M11	2017 M12	2018 M01	2018 M02	2018 M03	Average
Ireland	0.91	0.83	0.70	0.87	0.73	0.70	0.66	0.58	0.54	0.91	1.13	1.01	0.80
Cyprus	3.23	3.03	2.84	2.57	2.49	2.20	1.84	1.54	1.58	1.68	1.93	1.83	2.23
Finland	0.38	0.49	0.56	0.76	0.65	0.58	0.60	0.52	0.51	0.68	0.84	0.72	0.61

Source: (Own computation based on data from Eurostat database)

For our own analysis we calculated an average of 1.5%, based on the values of the average long-term interest rates for the top three performers in price stability: Greece (2.6%), Cyprus (1.1%) and Portugal (0.8%). By adding the two percentage points allowed, we obtain a reference value of the long-term interest rate for December 2019 of 3.5%.

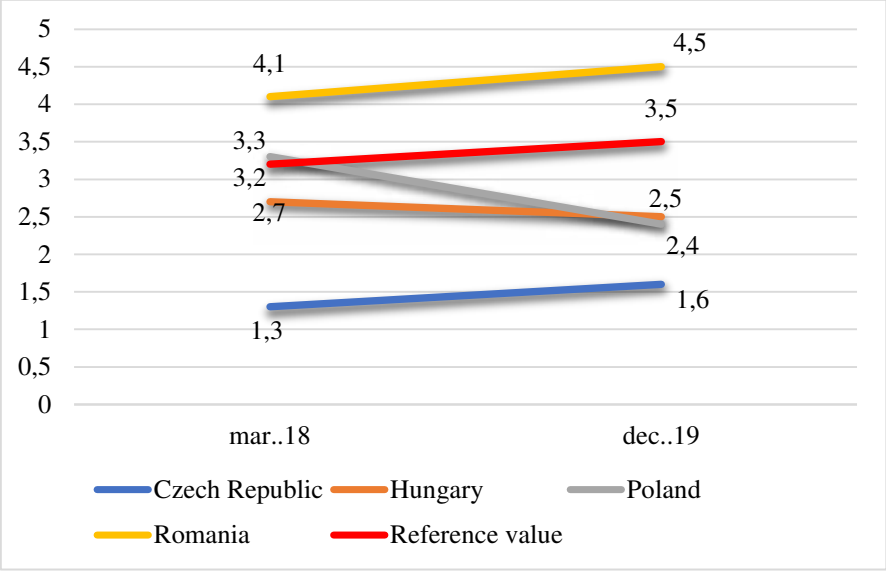
Table no.5 Interest rates for top 3 performers in December 2019

GEO/TIME	2019 M01	2019 M02	2019 M03	2019 M04	2019 M05	2019 M06	2019 M07	2019 M08	2019 M09	2019 M10	2019 M11	2019 M12	Average
Greece	4.21	3.84	3.76	3.42	3.37	2.67	2.16	1.98	1.50	1.34	1.36	1.42	2.60
Cyprus	2.22	2.00	1.74	1.49	1.34	0.82	0.66	0.44	0.48	0.51	0.58	0.57	1.10
Portugal	1.67	1.55	1.32	1.18	1.02	0.59	0.44	0.17	0.20	0.19	0.35	0.41	0.80

Source: (Own computation based on data from Eurostat database)

In March 2018, Romania and Poland exceeded the reference value of 3.2%. In December 2019, Romania remains the only country that does not meet the durability of convergence criterion.

Figure no. 4. Long term interest rate (%) comparison between March 2018 and December 2019



Source: (Own computation in Excel)

5. Conclusion

In order to summarize our findings, we have drafted Table No. 6 to present the comparative analysis between the 2018 Convergence Reports and the situation registered in December 2019.

Until the 2020 Convergence Report is issued, it is important to take a look at the regress that the analyzed states have experienced.

- Both in March 2018 and December 2019, the Czech Republic does not meet two criteria: price stability and exchange rate stability.
- Both in March 2018 and December 2019, Hungary does not meet three criteria: price stability, sound and sustainable public finances, and exchange rate stability.
- In March 2018, Poland did not meet two criteria: exchange rate stability and durability of convergence, while in December 2019, Poland did not meet the price stability and the exchange rate stability criteria.
- In March 2018, Romania did not meet two criteria: exchange rate stability and durability of convergence. In December 2019, Romania did not meet any of the criteria.

We can observe that none of the analyzed countries meets the exchange rate stability criterion, as they do not take part in the ERM II mechanism. The countries that are closer to achieving nominal convergence are Poland and the Czech Republic, whereas the worst results are registered in Romania. Romania managed to steer away from the path to convergence and without further actions, it is under the risk of being placed under excessive deficit procedure.

Table no.6 Nominal convergence comparison between March 2018 and December 2019

Nominal convergence levels		Price stability	Sound and sustainable public finances			Exchange rate stability		Long-term interest rate (%)
		HICP inflation rate	Excessive deficit procedure	General government deficit (-) / surplus (+) (% of GDP)	Government consolidated gross debt (% GDP)	Participation in MCS II	Exchange rate to euro (%)	
Reference values		Max. 1,9% (Mar 18, Dec 19)		Max. 3%	Max. 60%	Min. 2 years	Max. +/- 15%	Max. 3,2 (Mar 18) 3,5% (Dec 19)
Country	Time period							
Czech Republic	Mar-18	2,2	Nu	1,4	32,7	Nu	3,5	1,3
	Dec-19	2,6	Nu	0,8	30,5	Nu	-0,1	1,6
Hungary	Mar-18	2,2	Nu	-2,4	73,3	Nu	-0,7	2,7
	Dec-19	3,4	Nu	-0,1	62,1	Nu	-2	2,5
Poland	Mar-18	1,4	Nu	-1,4	49,6	Nu	1,7	3,3
	Dec-19	2,1	Nu	0,0	47,3	Nu	-0,8	2,4
Romania	Mar-18	1,9	Nu	-2,9	35,3	Nu	-1,9	4,1
	Dec-19	3,9	Nu	-4,5	38,6	Nu	-2,0	4,5

Source: (Own computation in Excel)

Sustainability is a key factor for meeting the convergence criteria, as the requirement must be maintained long-term. In order to achieve sustainable convergence in all the countries studied, policy adjustments are required, especially those that encourage economic stability and fiscal policy soundness.

Efficiently absorbing macroeconomics shocks is more likely when there is a high degree of flexibility on the goods and services market and on the labor market. It is also necessary to create favorable conditions for the efficient use of capital and labor to achieve higher factor productivity and to boost long-term growth. A high degree of economic integration is also crucial for the synchronization of economic cycles. In order to avoid the accumulation of economic imbalances and excessive asset prices increases it is recommended to implement appropriate macro-prudential policies as well as a suitable framework for supervising financial institutions.

6. References

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