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Assessment of the Central and Eastern Europe Economies in the Years 2007-2010 Based on the Model of the Macroeconomic Stabilization Pentagon

JEL Classification: *E20, E60, G01*

Keywords: *Macroeconomic Stabilization Pentagon, global crisis, Central and Eastern Europe*

Abstract: *The model of the macroeconomic stabilisation pentagon allows for a quick insight into the most important macroeconomic indicators of an economy in question. On the basis of this concept - comparing pentagrams for particular years - changes of the economic condition of countries can be examined. Moreover, the analysis of each of the adopted criteria allows for the evaluation of achievement of particular goals by a country in terms of its economic policy. The aim of this article is to describe the condition of Central and Eastern Europe countries in the years 2007-2010. The economies analysed were compared at two levels. The first level concerned the macroeconomic situation of all economies in particular years just before and during the global economic crisis. At the second level, the changes in the analysed indicators in particular economies of Central and Eastern Europe were compared. The results of the analysis shall contribute to the formulation of conclusions concerning the influence of the financial crisis upon the macroeconomic situation of the CEE countries.*

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Introduction

The countries of Central and Eastern Europe (Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia) are a group of post-socialist countries which have long been an area of interest for economic research, due to the fact that all have undergone a process of transformation, have been recognised by the European Union as functioning market economies, and joined the EU structures in 2004 and 2007. As a result, significant similarities of these economies are conducive to making various comparisons of their macroeconomic performance. One of the methods used in the comparative analysis of the economic condition of these transition countries is the concept of macroeconomic stabilisation pentagon (MSP). It enables an assessment of the macroeconomic situation in the surveyed countries in a given year against the results of other economies and makes it possible to trace the dynamics of changes in this area over the time span of the analysis.

In this article, the research covered the years 2007-2010. This allows the author to achieve the objective of the research, which is the comparison of the condition of these economies prior to the outbreak and during the recent crisis. The results of the analysis will help to draw conclusions about the impact of the global financial crisis on the macroeconomic situation of the CEE countries.

Model of the Macroeconomic Stabilisation Pentagon

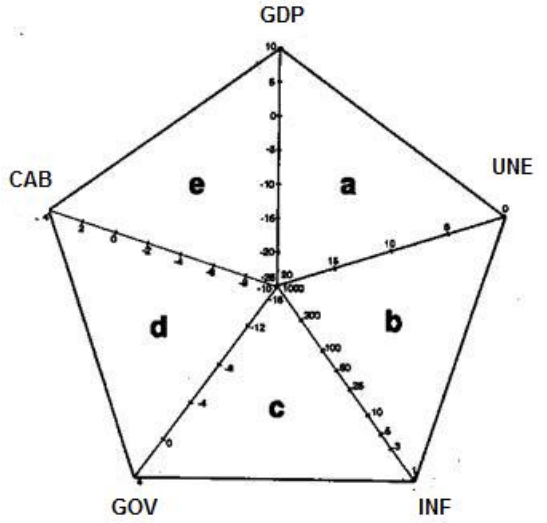
The concept of the macroeconomic stabilisation pentagon is derived from the method of analysis of the economy introduced by R. Mundell and A.W. Phillips, the so called magic quadrangle, presenting the achievements in each year in terms of one of the four objectives of economic policy: rapid growth, full employment, low inflation and external balance.

In Poland, the concept of macroeconomic stabilisation pentagon, supplemented by an additional criterion (state budget), was developed in 1990 at the Foreign Trade Research Institute (*Instytut Koniunktur i Cen Handlu Zagranicznego*), and in subsequent years was used in the analysis by Kołodko (1993), Misala and Bukowski (2003), Matkowski (2003, 2005) and Misala (2006, 2007).

The model of the macroeconomic stabilisation pentagon, applied mainly to the analysis of transition countries, includes five basic macroeconomic indicators (see Figure 1):

a) economic growth rate (GDP), a synthetic expression of the level of economic development of the country;
b) unemployment rate (UNE), measured as the ratio of the labour force able to work to the number of employees;
c) inflation rate (INF), regarded as an indicator of internal balance and measured by the consumer price index;
d) state budget balance (GOV), measured in relation to the GDP;
e) current account balance (CAB), measured in relation to the GDP.

Figure 1. Macroeconomic stabilisation pentagon



Source: Compiled by the author, based on Kołodko (1993, p. 52).

The pentagon vertices are calibrated in such a way that the better the development of the analysed indicators, the further away they move from the centre. The scales adopted for each variable are increasing or decreasing, depending on which direction of change is considered positive for the economy (for example, decreasing for the rates of unemployment and inflation, and increasing for the rate of GDP). As shown in Figure 1, the macroeconomic stabilisation pentagon has five triangles:

a – the real sphere triangle, bounded by the GDP changes and unemployment rates

b – the stagflation triangle, i.e. of unemployment and inflation

c – the budget and inflation triangle, the shape of which depends on the inflation dynamics and the state budget balance

d – the financial equilibrium triangle, determined by the sizes of the state budget balance and the current account state
e – the external sector triangle, resulting from the formation of the current account balance and the GDP growth.

$$MSP = a + b + c + d + e =$$

$$[GDP \cdot UNE + UNE \cdot INF + INF \cdot GOV + GOV \cdot CAB + CAB \cdot GDP] \cdot k$$

where $k = \frac{1}{2} \sin 72^{\circ} = 0{,}475$

MSP1 = a + b + c, determines the formation of the inner sphere, and MSP2 = d + e, represents the sphere dependent on external factors.

Unfortunately, in practice, due to the *implicite* assumption in this model on the possibility of full optimisation of several more or less competing goals of stabilisation policy, it is not possible to achieve the optimal solution. Moreover, similarly to every set of indicators, this one used for the comparison of the effects of stabilisation is incomplete; it is because it characterises selected macroeconomic values only at a given moment.

Nevertheless, this approach is worth using; it is because applying the analysis in its dynamic form one can indicate trends in the macro-economic stabilisation (to be more precise, progressive deepening of stabilisation or destabilisation). According to the model, one can talk about destabilisation in the case of the decline in the MSP indicator, and about progressive stabilisation – in the case of its growth.

In addition, the analysis of each of the adopted criteria and the synthetic indicators MSP1 and MSP2 allow for the assessment of the achievement of the specific objectives of the country's economic policy (for more see Misala 2007, p. 13). It should be noted that in accordance with the assumptions of this model, the image of the economic situation of a country in a given period depends largely on the scaling of measurement of the used indicators.

Empirical Results of the Formation of the Macroeconomic Stabilisation Pentagons in CEE

Preparing the graphic image of the macroeconomic stabilisation pentagons, partial triangles (a, b, c, d, e) and calculation of indicators MSP, as well as MSP1 and MSP2, required the identification of the maximum and minimum values of the analysed macroeconomic variables for the entire group of CEE

countries in the period 2007-2010 (see Götz 2011, pp 67-68). They were used to determine the pentagon vertices and the scale for each variable. On their basis, the areas of the partial triangles were estimated (considering the assumption that the maximum value of such a field is 0.2, and the area of an MSP pentagon is 1).

A comparison of shapes of macroeconomic stabilisation pentagons in the CEE countries in 2007 (see Appendix) allows for drawing the following conclusions. The most balanced and well-filled pentagons, characterising the overall condition of the economy, refer to the Czech Republic, Slovenia and Poland, and the worst at the time – in terms of the analysed criteria – referred to Bulgaria, Latvia and Hungary. What draw attention in the group of the weakest countries in terms of meeting the macroeconomic criteria is a very high deficit in the current account balance in Bulgaria (-25.2% of the GDP) and Latvia (-22.4% of the GDP), as well as double-digit inflation (10.1%) in Latvia. However, in 2007 Hungary recorded the lowest growth rate of the GDP in the region (only 0.1%) and the least favourable rate considering the budget (-5.1% of the GDP). Coping with ever deeper economic slowdown in this country was mainly connected with the collapse in domestic demand (see more NBP 2008, p. 8).

These findings are largely confirmed by the analysis of the sub-indices and the MSP, MSP1 and MSP2 indicators in 2007, presented in Table 1. The MSP synthetic index reached the highest level for Slovenia, followed by the Czech Republic, Slovakia, Lithuania and Poland. The lowest values of the MSP were recorded for Bulgaria, Latvia and Hungary.

Table 1. Sub-indices and the MSP index in the CEE countries in 2007*

Country	Area a	Area b	Area c	Area d	Area e	MSP1	MSP2	MSP
Bulgaria	0.127	0.101	0.109	0.019	***0.021***	0.337	***0.040***	***0. 377***
Czech Rep.	0.135	**0.139**	0.129	0.094	0.110	0.403	0.204	0.607
Estonia	0.150	0.119	0.119	0.057	0.065	0.388	0.122	0.510
Hungary	***0.094***	0.096	***0.085***	0.071	0.076	***0.275***	0.147	0.422
Latvia	0.146	***0.088***	0.088	***0.028***	0.037	0.322	0.065	0.387
Lithuania	**0.168**	0.130	0.111	0.057	0.077	**0.409**	0.134	0.543
Poland	0.110	0.110	0.126	0.084	0.106	0.346	0.190	0.536
Romania	0.130	0.120	0.109	0.056	0.072	0.359	0.128	0.487
Slovakia	0.110	0.102	**0.130**	0.087	**0.124**	0.342	**0.211**	0.553
Slovenia	0.145	0.136	0.127	**0.095**	0.113	0.408	0.208	**0.616**

* bold indicators show the best result in each category, and bold italic – the worst

Source: Own calculations based on the Eurostat data (06.04.2013).

However, the situation in the inner sphere (MSP1) was the best in Lithuania, Slovenia and the Czech Republic, while the worst – in Hungary, Latvia and Bulgaria. The MSP2 indicator – referring to the outer sphere – was the best for Slovakia, Slovenia and the Czech Republic, while the worst for Bulgaria and Latvia.

In 2008, the countries of Central and Eastern Europe began to experience the effects of the crisis that was affecting developed economies. In the first stage, this region experienced the strongest crisis of trust. This was caused mainly by heavy dependence on foreign capital resulting from external imbalances persisting in these economies and relatively high public sector deficits, as well as earlier significant increase in lending in foreign currencies. As a result of the global risk aversion and the contagion effect, the scale of the capital outflows and depreciation of national currencies in the region turned out to be ones of the largest among the emerging economies.

The other factor which reduced the resistance of the CEE countries to the global crisis were also, increasing in previous years, commercial and financial relations with the EU-15 countries undergoing a serious crisis (for more see Jodkowska 2012, pp. 686-688, Zbierzchowska 2010, pp. 43-46).

As the analysis of the macroeconomic stabilisation pentagons for the CEE countries in 2008 indicates (see Appendix), in the first period after the outbreak of the global crisis, its effects were most acutely felt by Latvia, where most of the analysed macroeconomic indicators deteriorated dramatically (compared to 2007, the GDP decreased by almost 13 pp, reaching -3.3%, unemployment rose by 1.5 pp, with a simultaneous increase in inflation up to 15.3%).

The macroeconomic situation also deteriorated significantly in Estonia (compared with 2007, the GDP fell by more than 11 pp, the inflation reached 10.6%, the balance of the state budget deteriorated, and unemployment slightly increased) and Lithuania, which experienced a slowdown, but did not record a decline in the GDP, while the inflation indicators (increase by over 5%), unemployment and the state budget balance deteriorated. The other economies of the region, showing a slowdown (in most cases through the rising unemployment and inflation) did not show such a significant effect of the impact of the global crisis on the overall macroeconomic situation as the Baltic States.

However, the analysis of the synthetic indicator MSP (see Table 2) allows the author to conclude that in 2008 the best overall macroeconomic situation, similarly to 2007, was recorded by the Czech Republic, Slovenia, Poland and Slovakia, while the weakest condition was shown by the economies of Latvia, Bulgaria (where the negative trends from before the outbreak of the crisis persisted), as well as Estonia and Lithuania.

The MSP1 indicators on the inner sphere were at the highest level in Slovenia, the Czech Republic and Poland, while the lowest in the Baltic States. The outer sphere, depicted by the ratio MSP2, was best in the Czech Republic, Slovakia and Slovenia, while the worst in Bulgaria, Latvia and Lithuania.

Table 2. Sub-indices and the MSP in the CEE countries in 2008*

Country	Area a	Area b	Area c	Area d	Area e	MSP1	MSP2	MSP
Bulgaria	0.136	0.081	0.082	***0.027***	***0.030***	0.299	***0.057***	0.356
Czech Rep.	0.127	0.123	0.104	**0.097**	**0.107**	0.354	**0.204**	**0.558**
Estonia	0.082	0.090	0.078	0.070	0.055	0.250	0.125	0.375
Hungary	0.096	0.105	0.100	0.075	0.079	0.301	0.154	0.455
Latvia	***0.076***	***0.053***	***0.050***	0.055	0.047	***0.179***	0.102	***0.281***
Lithuania	0.120	0.088	0.074	0.057	0.065	0.282	0.122	0.404
Poland	0.120	0.119	0.109	0.077	0.098	0.348	0.175	0.523
Romania	**0.140**	0.105	0.083	0.056	0.084	0.328	0.140	0.468
Slovakia	0.106	0.104	**0.118**	0.083	0.102	0.328	0.185	0.513
Slovenia	0.129	**0.129**	0.110	0.084	0.093	**0.368**	0.177	0.545

* bold indicators show the best result in each category, and bold italic – the worst

Source: Own calculations based on the Eurostat data (06.04.2013).

In 2009, the spread of the crisis in the global economy resulted in a substantial deepening of the recessionary trends in the region, related primarily to the continued significant fall in external demand (see more NBP 2009, p. 3). These trends are clearly reflected in the shape of the macroeconomic stabilisation pentagons of the CEE countries in 2009. Visible changes, compared to 2008, occurred in all the economies of the region (see Appendix), and the biggest difference can be seen in the GDP criterion (economic recession occurred in all analysed economies, with the exception of Poland, which sustained low economic growth) and inflation (significant slowdown in price growth in the region).

Still, the most balanced and well-filled pentagons characterising the overall condition of the economy were recorded by the Czech Republic, Slovenia and Poland, and the worst at that time were Latvia, Lithuania and Estonia, which experienced over a 14% decline in the GDP volumes – the largest in the region, and in the case of Latvia (17.17%) – in the world.

The development of the synthetic MSP index in 2009 indicates destabilisation of all the economies in the region with the exception of Bulgaria and Estonia, where the MSP in 2009 was higher than that in 2008. The highest MSP level in this period was reached by the Czech Republic, Poland and Slovenia, while the lowest – by Latvia, Lithuania and Romania. The MSP1

indicator, which reflects the inner situation, was best in the Czech Republic, Slovenia and Bulgaria, while the situation in the external sphere, measured by the MSP2, was best in Poland, Hungary and Estonia, while worst in Latvia, Lithuania and Bulgaria.

Table 3. Sub-indices and the ratio of MSP in the CEE countries in 2009*

Country	Area a	Area b	Area c	Area d	Area e	MSP1	MSP2	MSP
Bulgaria	0.070	0.131	0.116	0.068	0.051	0.317	0.119	0.436
Czech Rep.	0.076	0.143	0.118	0.083	0.071	**0.337**	0.154	**0.491**
Estonia	0.018	0.089	**0.139**	**0.117**	0.033	0.246	0.150	0.396
Hungary	0.053	0.101	0.107	0.095	0.066	0.261	0.161	0.422
Latvia	***0.004***	***0.047***	0.088	0.098	***0.015***	***0.139***	***0.113***	***0.252***
Lithuania	0.016	0.076	0.086	0.087	0.029	0.178	0.116	0.294
Poland	**0.097**	0.114	0.095	0.074	**0.094**	0.306	**0.168**	0.474
Romania	0.065	0.112	***0.081***	***0.068***	0.058	0.258	0.126	0.384
Slovakia	0.052	0.099	0.106	0.075	0.069	0.257	0.144	0.401
Slovenia	0.062	**0.147**	0.116	0.088	0.060	0.325	0.148	0.473

* bold indicators show the best result in each category, and bold italic – the worst

Source: Own calculations based on the Eurostat data (06.04.2013).

Both the analyses of the shape of macroeconomic stability pentagons, which in 2010 – compared to 2009 – in all the countries of the region were better filled up, and the higher MSP rates in 2010, testify to the significant improvement of the macroeconomic situation in the countries of Central and Eastern Europe. In 2010, based on a graphic image of pentagons (see Appendix), it can be concluded that the best overall economic condition was in the Czech Republic and Slovenia. From among the analysed economies, these countries had the lowest level of unemployment, low inflation, a positive GDP rate and relatively positive budget and current account balance indicators.

However, the economies of Latvia, Lithuania, Estonia and Slovakia stand out strongly negatively, as compared to the other CEE countries, in terms of unemployment, which in Slovakia amounted to almost 15%, while in the Baltic States it was at the level of 16.9% in Estonia, 18% in Lithuania and almost 20% in Latvia. Latvia and Poland recorded the lowest balance of the state budget in the region (at the level of -8.1% and -7.9% of the GDP, respectively). In 2010, Poland also showed the worst current account balance among the CEE countries (-5.1% of the GDP). Moreover, the shape of the stability pentagon in Romania can be adversely evaluated, mainly because of the persistence of the economic recession and ones of the most negative in-

dicators GOV and CAB in the region. As the results in Table 4 indicate, a synthetic MSP rate in 2010 was the highest for the Czech Republic, Slovenia and Estonia, while in Latvia, Lithuania and Slovakia the general macroeconomic situation was the worst during this period.

The MSP1 indicator on the inner sphere was the highest in the Czech Republic, Slovenia and Poland, and reached the lowest level in Latvia, Lithuania and Estonia. Meanwhile, the MSP2 indicator for the economy sector dependent on external factors, by far the most positive was recorded for Estonia, followed by Hungary and Latvia, while its lowest values were recorded for Romania and Poland.

Table 4. Sub-indices and the MSP ratio in the CEE countries in 2010*

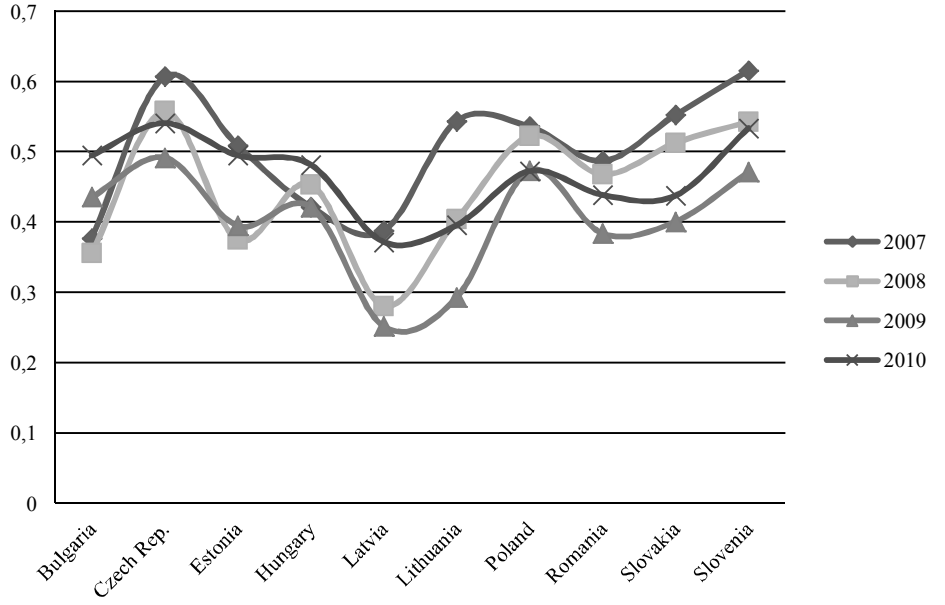
Country	Area a	Area b	Area c	Area d	Area e	MSP1	MSP2	MSP
Bulgaria	0.080	0.103	0.118	0.096	0.097	0.301	0.193	0.494
Czech Rep.	**0.106**	**0.135**	0.120	0.082	0.098	**0.361**	0.180	**0.541**
Estonia	0.050	0.058	**0.135**	**0.124**	**0.128**	0.243	**0.252**	0.495
Hungary	0.078	0.090	0.104	0.099	0.110	0.272	0.209	0.481
Latvia	***0.026***	***0.042***	0.110	0.090	0.105	***0.178***	0.195	***0.373***
Lithuania	0.040	0.053	0.109	0.086	0.108	0.202	0.194	0.396
Poland	0.098	0.109	0.099	***0.069***	0.099	0.306	0.168	0.474
Romania	0.089	0.107	***0.088***	0.074	***0.081***	0.284	***0.155***	0.439
Slovakia	0.068	0.082	0.108	0.073	0.107	0.258	0.180	0.438
Slovenia	0.100	0.130	0.111	0.089	0.104	0.341	0.193	0.534

* bold indicators show the best result in each category, and bold italic – the worst

Source: Own calculations based on Eurostat data (06.04.2013).

The conclusions of the analysis of the CEE countries in terms of the best and weakest economic condition in the subsequent years of the period 2007-2010 are also visible on Figure 2, which presents the development of a synthetic indicator MSP. It also allows the author to compare the dynamics of changes of this indicator in different economies.

Figure 2. MSP indicator in the CEE countries: 2007-2010



Source: own compilation .

In 2007, for eight of the ten CEE economies (except Bulgaria and Hungary) the MSP rates were higher than in other years, indicating a very large impact of the global crisis on the economic situation of the region in 2008-2010. For the vast majority of countries, the year 2009 was the hardest, as the lowest values of the MSP indicator in this period were recorded; only Bulgaria and Estonia already experienced the worst indicators in 2008. For all the economies in the region, the year 2010 was the first year when the MSP levels were higher than a year earlier. This allows the conclusion that for the CEE economies, after the ongoing instability in the years 2008 and 2009, the year 2010 was the time when they entered the path of economic stability.

Conclusions

The empirical analysis of the macroeconomic stability pentagons for the countries of Central and Eastern Europe made it possible to compare the macroeconomic situation of these economies prior to the outbreak and during the recent global crisis and to draw the following conclusions. Throughout the entire period of 2007-2010, the Czech Republic and Slovenia showed the highest MSP level, which indicates a better overall condition of the

economy as compared to other CEE countries. In the years 2008-2009, due to maintaining a positive GDP growth, Poland was also among the countries with the highest MSP.

Among the countries of Central and Eastern Europe the effects of the crisis were felt fastest and most severely in Latvia (in 2008-2010 the lowest MSP level in the region). In 2009, the deepest declines in the GDP and the worst macroeconomic situations were recorded in the Baltic States. In this group of economies, stabilisation took places fastest in Estonia.

Besides Bulgaria and Hungary, where – compared to 2007 – in the following years there was some improvement in the external sphere, none of the other CEE economies in 2010 reached the 2007 level of the MSP. Between 2008 and 2009 the countries had to deal with the ongoing process of economic instability and persistent negative effects of the global crisis on the overall economic condition of the countries of Central and Eastern Europe. The first signs of positive changes in the economic condition of all the countries in the region appeared only in 2010, with the improvement of the MSP synthetic indicators.

References

Götz M. (2011), *Ocena prognozowanej sytuacji gospodarczej USA i wybranych krajów UE w latach 2012-2015 z wykorzystaniem metody pięciokąta stabilizacji makroekonomicznej*, „Optimum, Studia Ekonomiczne", No. 6 (54).

Jodkowska L. (2012), *Gospodarka Polski w dobie kryzysu na tle wybranych krajów Europy Środkowo-Wschodniej* [in:] K. Piech, K. Wierus (eds.), *Ostatni światowy kryzys finansowy – przyczyny, przebieg, polityka, przedsiębiorstwa*, Instytut Wiedzy i Innowacji, Warszawa.

Kołodko G. (1993), *Kwadratura pięciokąta. Od załamania gospodarczego do trwałego wzrostu*, Poltext, Warszawa.

Matkowski Z. (2003), *Sytuacja gospodarcza krajów posocjalistycznych – ekonomiczne i społeczne efekty transformacji*, „Ekonomista", No. 6.

Matkowski Z. (2005), *Gospodarka Polski na tle innych krajów Europy Środkowo-Wschodniej* [in:] E. Czarny, (ed.), *Gospodarka polska na przełomie wieków od A do Z*, Narodowy Bank Polski, Warszawa.

Misala J. (ed.) (2006), *Makroekonomia gospodarki otwartej*, Wyd. Politechniki Radomskiej, Radom.

Misala J. (2007), *Stabilizacja makroekonomiczna w Polsce w okresie transformacji ze szczególnym uwzględnieniem deficytów bliźniaczych*, Instytut Gospodarki Światowej, Warszawa, No. 283.

Misala J., Bukowski S. (2003), *Stabilizacja makroekonomiczna w Polsce w okresie transformacji*, „Ekonomista", No. 5.

NBP (2008), *Analiza sytuacji gospodarczej w krajach Europy Środkowo-Wschodniej*, Narodowy Bank Polski, Instytut Ekonomiczny, Biuro Gospodarki Światowej i Europejskiej Integracji Gospodarczej, Marz.

NBP (2009), *Analiza sytuacji gospodarczej w krajach Europy Środkowo-Wschodniej*, Narodowy Bank Polski, Instytut Ekonomiczny, Biuro Gospodarki Światowej i Europejskiej Integracji Gospodarczej, May.

Zbierzchowska D. (2010), *Konsekwencje stosowania określonych systemów kursowych w warunkach kryzysu finansowego w krajach Europy Środkowo-Wschodniej*, „Equilibrium", No. 1(4).

Appendix – the macroeconomic stabilisation pentagons in the CEE

Bulgaria 2007

Bulgaria 2008

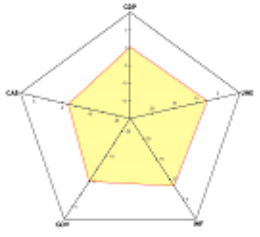
Czech Rep. 2007

Czech Rep. 2008

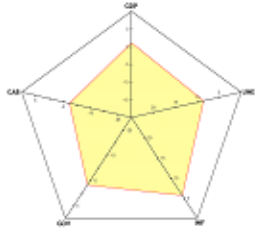
Estonia 2007

Estonia 2008

Hungary 2007



Hungary 2008

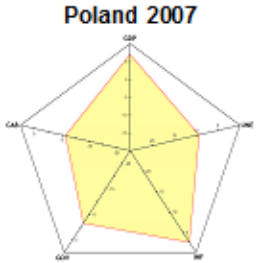


Latvia 2007

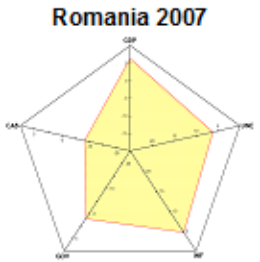
Latvia 2008

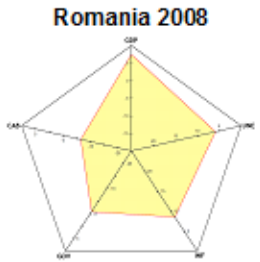

Lithuania 2007

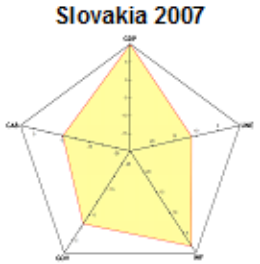

Lithuania 2008


Poland 2007


Poland 2008


Romania 2007


Romania 2008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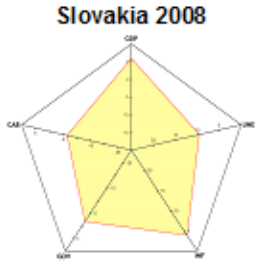
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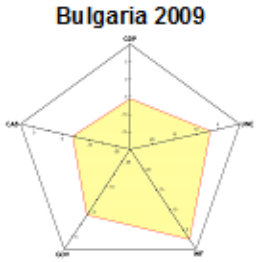
Slovenia 2007


Slovenia 2008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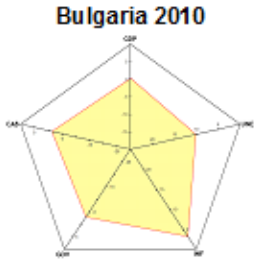
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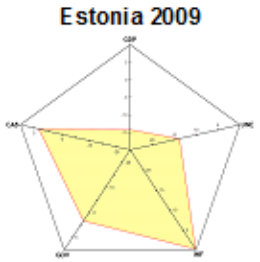
Czech Rep. 2009


Czech Rep. 2010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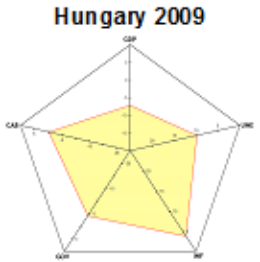
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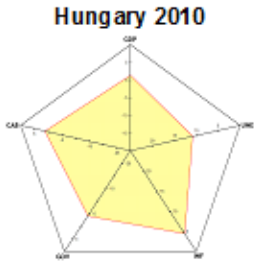
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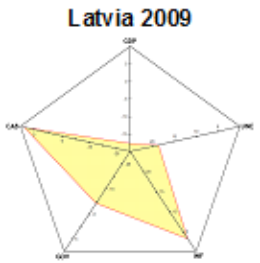
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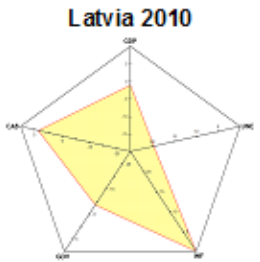
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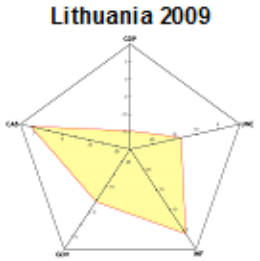
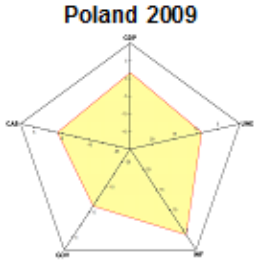
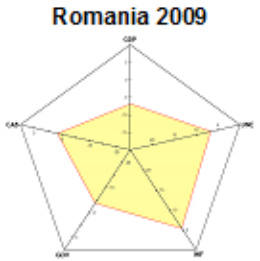

Lithuania 2009


Lithuania 2010


Poland 2009


Poland 2010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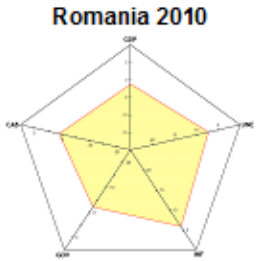
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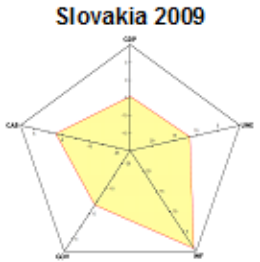
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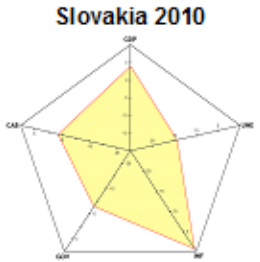
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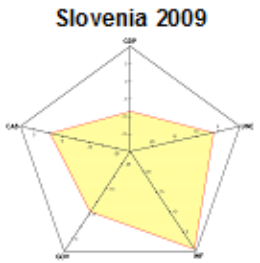
Slovenia 2009


Slovenia 2010