

## **FORMING OF MUTUAL RELATION OF ECONOMIC STABILIZATION PARAMETER IN TRANSFORMATION COUNTRIES IN YEARS 1998-2004**

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### **ABSTRACT**

This article presents the comparison analysis of the indicators of macroeconomic stabilisation of 27 countries of Asia and Europe within 1998-2004, the political system transformation from planning-distributive to market economy was carried out. On the base of calculated the indicators of macroeconomic stabilisation, it was showed the ranking of those countries with the division into years and sort of macroeconomic indicators. The analysis are illustrated on the graphs where we can find the values of macroeconomic indicators in period of time especially for Poland and Slovakia.

### **KEYWORDS**

macroeconomic indicators, macroeconomic stabilisation, comparison analysis, transformation countries

### **Introduction**

The opinion about the economic condition of the state requires the analysis of many macroeconomic factors in long term. Then, you could be informed about relative and complete relationships of those parameters but also about their dynamic of variation in time. In this case, we are informed if macroeconomics position of the particular state was improved or was got worsen and what is the scale of changes.

The transformation of political and economic system covered 27 countries of Europe and Asia after 1989. The idea of changes was to implement democratic order and market economic. At the beginning of 1990-ties most of those countries implemented the basic rules of market economic, nevertheless the stage of advanced practical changes is different.

After the significant changes of economics and the rules of governing the state, most of them realised that creation of basic macroeconomics relationships mostly depends on economic policy carried out by their governments. The basic question asked by the

author of this report was how the mutual relations among macroeconomic factors of all transformation countries were created, who the better and the worse one and in which fields was.

The foundation of the analysis was five macroeconomic indicators as follows :

- dynamic of growth of *Gross Domestic Product (GDP)*- calculated as dynamic of changes the value of current year in the comparison with last year;
- *the rate of unemployment* - calculated as the indicator of unemployment
- *the rate of inflation* - calculated as price increase of goods and services
- *the rate of budget balance to GDP*.- calculated as quotient of the value of budget deficit or budget surplus to GDP
- *the rate of current account balance to GDP*.- calculated as quotient of the surplus or deficit of this balance to GDP

It was not carried out direct analysis of changes of those values under the method below. On that base it was calculated *the indicators of macroeconomic stabilisation*. After that it was made analysis of the mutual relations of those indicators for different countries and within different period of time.

The subject of analysis was the following *indicators of macroeconomics stabilisation* (their definition were described in the next subchapter): indicator of real sphere (A), indicator of stagflation (B), indicator of budget and inflation (C), indicator of finances balance (D), indicator of external sector (E) and integrated indicator of macroeconomic stabilisation (psm).

The analysis was carried out taking into consideration all transformation countries and its geographical area as follows:

- *Central Europe* – Poland, Czech Republic, Slovakia, Hungary;

- *South-eastern Europe* – Slovenia, Albania, Bosnia & Herzegovina, Bulgaria, Croatia, Serbia & Montenegro, Macedonia, Romania;
- *Baltic States* – Estonia, Lithuania, Latvia;
- *CIS Eastern Europe* – Russia, Belarus, Moldova, Ukraine;
- *CIS - Caucasus* – Armenia, Azerbaijan, Georgia;
- *CIS - Central Asia* – Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan;

The analysis covers the period of time within 1998-2004. Until 1998 there has been permanent significant modifications of economic relationships (in the different stages of promotion), creation new institutions of own state system, creation new economic law and building the market institutions in the transformation countries. Since 1998 the changes have seemed to be rather stable than previously and the tendency of basic macroeconomics relations mostly depend on economic policy of the government of particular states.

### **The methods of analysis and the way of presentation the results**

The data for analysis are included in Table 1  
The standardisation of input data to be positive figures (relative relations) was used in the analysis.  
The following formulas by standardisation were applied:

$D_{st} = (X_i - X_{min}) / (X_{max} - X_{min})$  – for variables which max value are mostly desired as follows dynamic of growth of *Gross Domestic Product (GDP)*, the rate of budget balance to *GDP* and the rate of current account balance to *GDP*;

$D_{st} = (X_{max} - X_i) / (X_{max} - X_{min})$  – for variables which min. value are mostly desired as follows rate of inflation and rate of unemployment

where:

- $D_{st}$  - standardised relative value of the variable;
- $X_i$  - complete value of the variable;
- $X_{max}$  – top limit of the section of complete value of the variable;
- $X_{min}$  - bottom limit of the section of complete value of the variable;

When the standardisation is applied, the most desired figures are possible greatest positive value of  $D_{st}$

For the purposes of this article the following max and min value are estimated for all countries:

- *dynamic of growth of Gross Domestic Product* – min. (-18,0 %) max. (+20,4 %);

- *the rate of unemployment* – min. (0 %) max. (+42 %)
- *the rate of inflation* – min. (-7,6 %) max. (100 %);
- *the rate of budget balance to GDP* – min. (-12,3 %) max. (4,7 %);
- *the rate of current account balance to GDP* – min. (-36,7 %) max. (18 %);

The further analysis were carried out on the base of model *psm* (*pentagon of macroeconomic stabilisation*), proposed by Professor Grzegorz W. Kołodko [5]. The idea of this model is creation the pentagon which peaks show five macroeconomic variables of the table 1. We can calculate *integrated indicator psm* of this pentagon that is the total area of five peaks (the figures are coming from calculated parameters). From the point of view of growth and stability of economics, it is important that those indicators should be at the highest possible level.

The peak of the pentagon are located in the following way, if the distance of the middle of pentagon is greater, the better value of particular macroeconomic relation is. Then, it was applied reverse scale for the relation: *the rate of unemployment* and *the rate of inflation*. Measure of the area of those triangles will be called *indicators of macroeconomic stabilisation* in the further part of the article.

It was calculated *indicators of macroeconomic stabilisation* on the base of standardised data as follows :

- indicator of *real sphere (A)* - calculated as quotient of indicator of constant and standardised values of dynamic growth *GDP* and the unemployment rate;
- indicator of *stagflation (B)* - calculated as quotient of the indicator of constant and standardised values of the unemployment rate and the rate of inflation
- indicator of *budget and inflation (C)* - calculated as quotient of the indicator of constant and standardised values of the rate of inflation and relation the rate of budget balance to *GDP*
- indicator of *finances balance (D)* - calculated as quotient of the indicator of constant and standardised values of the relation the rate of budget balance to *GDP* and the relations the rate of current turnover to *GDP*;
- indicator of *external sector (E)* - calculated as quotient of the indicator of constant and standardised values of the relation the rate of current turnover to *GDP* and dynamic of growth of *GDP*;
- *integrated indicator psm* - calculated as the total of all indicators of macroeconomic stabilisation.

The value of Constant Indicator is coming from the formula for calculating the area of triangle when we have the value of the length of 2 its side.  $(1/2 * \sin(72^\circ))$

The results of the *indicators of macroeconomic stabilisation* were showed in the Table 2. We can find graphic presentation of those value in period of time including the division into the groups of country in the drawing from 1 to 5. It was presented the indicators for Poland and Slovakia as the comparison for each graph.

In *Integrated indicator psm* and indicators (A) to (E) of macroeconomic stabilisation are the relative relations. Their complete values can not be treated as any concrete information and they depend on value of section limit of variables for particular macroeconomic parameter. They can allow us to make analysis of the dynamic of changes in period of time and to carry out comparison analysis among particular countries.

It was calculated the ranking of the countries on the base of indicators of macroeconomic stabilisation. The higher position in ranking means more profitable macroeconomic relations compared with countries with lower position in the ranking. The results of calculated position to be found in Table 3 – with the division into sort of indicators and groups of country.

It was presented the leaders and outsiders of all analysed countries in the particular years with the division into the sort of macroeconomic indicators in Table 4

It was presented the leaders and outsiders for the particular group of countries in Table 5 in the similar way to Table 4.

## Conclusion

After the analysis of data of Tables we can conclude that creation the mutual relations of the parameters of macroeconomic stabilisation only in small part depend on the level of advanced market reforms and democratic transformation in the particular years. Most transformation countries implemented structural changes and market mechanisms in the period of time that was analysed. In this period of time more important is the way and standard of carrying on the economic policy by the government of particular countries.

## REFERENCES

- [1] *New Europe – Report on Transformation*”  
– XIII Economic Forum Krynica Poland

2002 , report produced under the guidance of. Prof. D. K. Rosati,, Instytut Wschodni, Warszawa, 2002

- [2] IMF, International Financial Statistics, May 2005

- [3] EBRD, *Transition Report Update* , 2004, 2005

- [4] the World Bank, *World Development Indicators*, 2005

- [5] Kołodko G. – „*Quadrature of pentagon. From economic slump to sustained growth*”, Poltex, Warszawa, 1993

Table 1: The basal macroeconomics indicators

<i>Id</i>	<i>Country</i>	<i>1998</i>	<i>1999</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>Id</i>	<i>Country</i>	<i>1998</i>	<i>1999</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>
<b>Central Europe</b>																	
a	Poland	4,8	4,1	4,0	1,0	1,4	3,8	5,4	a	Estonia	5,2	-0,1	7,8	6,4	7,2	5,1	6,2
b		10,4	13,1	15,1	17,4	18,1	20	19,1	b		9,8	12,2	13,6	12,6	10,3	10	9,7
c		8,6	9,8	8,5	3,6	0,8	1,7	4,4	c		4,2	3,8	5	4,2	2,6	1,2	5
d		-3,2	-1,5	-1,8	-3,9	-3,6	-4,5	-4,8	d		-0,4	-4	-0,3	0,3	1,4	3,1	1,8
e		-4,3	-7,5	-6,1	-3,9	-3,6	-2,2	-1,5	e		-8,6	-4,4	-5,4	-5,7	-10,2	-13,2	-14
a	Czech Republic	-1,0	0,5	3,3	3,1	2,0	3,7	4,0	a	Lithuania	7,3	-1,7	3,9	6,4	6,8	9,7	6,6
b		6,5	8,8	8,7	8,0	7,3	7,8	8,0	b		13,2	14,6	16,4	17,4	13,8	12,4	11,5
c		10,7	2,1	3,9	4,8	1,8	1,0	2,8	c		2,4	0,3	1,5	2,1	-1,0	-1,3	2,8
d		-4,7	-3,7	-4	-2,8	-9,2	-11,7	-3	d		-3,0	-5,6	-2,6	-2,1	-1,6	-1,9	-2,5
e		-2,4	-2,8	-5,3	-5,7	-6,1	-6,5	-5,2	e		-11,7	-11,0	-5,9	-4,7	-5,2	-6,7	-6,7
a	Slovakia	4,2	1,5	2,0	3,8	4,6	4,5	5,5	a	Latvia	4,7	3,3	6,9	8,0	6,4	7,5	8,0
b		15,6	19,2	17,9	19,8	17,9	17,4	17,5	b		14,1	14,3	14,4	13,1	12,4	10,6	10,4
c		5,6	14,2	8,3	6,2	3,3	9,3	5,9	c		2,8	3,3	1,9	3,0	1,5	3,6	7,3
d		-5,0	-6,3	-12,3	-6,0	-5,7	-3,7	-3,3	d		-0,7	-5,3	-2,7	-1,6	-2,7	-1,5	-0,8
e		-9,3	-5,3	-3,5	-8,4	-8,0	-0,9	-3,0	e		-9,8	-9,1	-6,4	-8,9	-6,5	-8,6	-9,6
a	Hungary	4,9	4,2	5,2	3,8	3,5	3,0	4,0									
b		7,9	7,1	6,3	5,6	5,6	5,8	5,7	a	Russia	-5,3	6,3	10,0	5,1	4,7	7,3	7,1
c		14,2	10,0	9,8	9,2	5,3	5,7	5,5	b		12,3	12,9	10,5	9,0	8,0	8,3	8,0
d		-9,3	-5,2	-2,9	-5,2	-9,3	-7,1	-5,4	c		23,3	67,3	31,6	10,7	17,1	13,1	25,0
e		-4,7	-5,1	-6,2	-3,3	-7,2	-8,9	-8,6	d		-8,2	-3,1	3,2	2,9	0,6	1,1	2,9
<b>South-eastern Europe</b>																	
a	Slovenia	3,6	5,6	3,9	2,7	3,4	2,5	4,4	a	Belarus	8,4	3,4	5,8	4,7	5,0	6,8	11,0
b		7,6	7,4	7,2	5,9	5,9	6,7	6,1	b		2,3	2,2	2,1	2,3	3,0	3,2	1,9
c		6,5	8	8,9	7	7,2	4,7	3,2	c		181,7	251,3	107,5	46,1	34,8	27,5	14,5
d		-2,2	-2,1	-3,4	-2,8	-2,4	-2,0	-1,9	d		-0,5	-1,8	0,3	-0,4	-0,7	-0,9	-0,4
e		-0,6	-3,3	-2,9	0,2	1,7	0,0	0,2	e		-6,7	-1,6	-2,7	-3,5	-2,6	-3,6	-4,6
a	Albania	8,0	7,3	7,3	7,6	4,7	6,0	5,9	a	Moldova	-6,5	-3,4	2,1	6,1	7,8	6,3	7,0
b		17,8	18,0	16,8	16,5	16,2	15,1	14,5	b		9,2	11,1	8,5	7,3	6,8	7,9	8,0
c		8,7	-1,0	4,2	3,5	4,0	2,8	2,2	c		18,3	43,7	18,4	6,3	4,4	15,8	12,5
d		-10,4	-11,4	-9,1	-8,5	-8,0	-5,8	-5,3	d		-6,5	-6,2	-1,4	-0,3	-2	1,1	0,4
e		-6,1	-7,2	-7,4	-6,2	-9,0	-8,5	-7,0	e		-17,3	-6,7	-8,2	-2,6	-4,5	-6,7	-6,9
a	Bosnia & Herzegovina	9,9	9,6	5,5	4,4	5,5	4,0	5,0	a	Ukraine	-1,9	-0,2	5,9	9,2	5,2	9,6	12,1
b		38,0	38,5	39,6	40,4	40,5	42,0	41,0	b		3,7	4,3	4,2	3,7	3,8	3,6	3,6
c		1,8	-1,0	4,0	2,4	2,0	0,0	1,0	c		20,0	19,2	25,8	6,1	-0,6	8,2	12,3
d		-6,9	-7,0	-5,5	-3,3	-2,2	-0,2	-0,9	d		-2,8	-2,3	-1,1	-0,9	0,1	-0,7	-3,4
e		-8,7	-9,0	-13,1	-16,2	-18,5	-17,4	-19,1	e		-3,1	5,2	4,7	3,7	7,5	5,8	10,3
<b>CIS - Caucasus</b>																	
a	Bulgaria	4,0	2,3	5,4	4,1	4,8	4,3	5,5	a	Armenia	7,3	3,3	6	9,6	12,9	13,0	10,1
b		16,0	17,0	16,4	19,2	17,8	13,6	11,8	b		9,4	11,2	11,7	9,6	10,8	10,1	9,4
c		0,9	6,2	11,4	4,8	4,4	5,6	3,9	c		-1,3	2,1	0,4	3,0	2,5	4	2,6
d		0,9	-0,9	-1,0	-0,9	-0,8	-0,4	1,7	d		-4,9	-7,4	-6,3	-3,8	-0,6	-2,0	0,4
e		-0,5	-5,3	-5,6	-6,2	-4,3	-9,3	-7,4	e		-21,3	-16,6	-14,6	-10,0	-6,3	-6,8	-5,7
a	Croatia	2,5	-0,9	2,9	3,8	5,2	4,3	3,7	a	Azerbaijan	10	7,4	11,1	9,6	9,7	10,8	10,0
b		11,4	13,6	16,1	23,1	21,5	18,5	16,1	b		1,1	1,2	1,2	1,2	1,3	1,4	
c		5,4	4,4	7,4	2,6	2,7	2,1	2,7	c		-7,6	-0,5	2,2	1,5	2,0	3,6	10,5
d		-1,0	-6,5	-7,1	-5,8	-4,6	-6,3	-4,9	d		-3,9	-4,7	-0,6	1,4	-0,5	-1,2	0,8
e		-7,1	-7,0	-2,5	-3,7	-8,5	-7,2	-5,6	e		-30,7	-13,1	-3,6	-0,9	-12,3	-28,3	-27,1
a	Serbia & Montenegro	1,9	-18,0	5,0	5,5	4,0	3,0	7,2	a	Georgia	2,9	3,0	1,9	4,7	5,5	11,1	8,4
b		26,8	27,9	28,4	27,5	28,4	32,0	30,1	b		12,3	12,7	10,3	11,1	11,1	14,4	14,6
c		44,5	36,5	113,5	39,3	15,2	7,7	13,6	c		7,2	10,9	4,6	3,4	6,0	7,0	7,5
d		-5,4	-3,8	-0,8	-1,9	-5,6	-3,4	-2,0	d		-5,4	-6,7	-4,1	-2,0	-1,7	-2,9	0,7
e		-4,8	-7,5	-3,9	-4,6	-8,8	-9,6	-10,5	e		-9,4	-8,2	-4,4	-6,5	-6,0	-7,2	-7,2
a	Macedonia	3,4	4,4	4,5	-4,5	0,9	3,2	2,3	a								
b		34,5	32,4	32,2	28,9	31,9	36,7	36,9	b								
c		-2,4	2,3	6,1	3,6	1,1	2,5	3,3	c								
d		-1,7	0,0	1,8	-7,2	-5,6	-1,6	0,1	d								
e		-7,5	-0,9	-2,1	-6,9	-9,5	-6	-6,8	e								
a	Romania	-4,8	-1,2	2,1	5,7	5,1	5,2	8,3	a								
b		10,4	11,8	10,5	8,8	8,4	7,2	6,2	b								
c		40,6	54,8	40,7	30,2	17,9	14,2	9,3	c								
d		-5,0	-3,5	-4,0	-3,5	-2,6	-2,4	-1,2	d								
e		-6,9	-3,6	-3,6	-5,8	-3,4	-6,1	-7,5	e								

Source: [2], [3], [4]

Table 1: continuation

<i>Id</i>	<i>Country</i>	<i>1998</i>	<i>1999</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>Id</i>	<i>Country</i>	<i>1998</i>	<i>1999</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>				
<b>CIS - Central Asia</b>																					
a	Kazakhstan	-1,9	2,7	9,8	13,5	9,5	9,2	9,4	b	Turkmenistan	6,7	16,4	18,6	20,4	19,8	16,9	7,5				
b		6,6	6,3	12,2	11,0	9,3	8,8	8,4	c		0,0	0,0	0,0	0,0	0,0	0,0	0,0				
c		1,9	17,8	9,6	6,4	6,2	6,4	6,7	d		19,8	21,2	7,4	11,7	7,8	5,7	13,8				
d		-8,0	-5,2	-1,0	-0,9	-0,3	4,7	2,2	e		-2,6	0	-0,4	0,7	0,2	-1,8	-2,2				
e		-5,6	-1,0	4,8	-4,0	-2,8	-0,2	-0,1	a	Uzbekistan	2,1	3,4	3,2	4,1	3,1	1,5	7,1				
a	Kyrgyzstan	2,1	3,7	5,3	5,4	0	6,7	7,1	b		0,4	0,4	0,4	0,4	0,4	0,3	0,2				
b		4,3	5,4	5,6	5,0	4,0	4,4	4,9	c		26,1	26	28,2	26,4	21,6	7,7	12,0				
c		18,4	39,9	9,5	3,8	3,4	5,6	2,8	d		-3,3	-2,6	-2,2	-2,1	-1,5	-0,6	-2,0				
d		-9,4	-11,8	-9,6	-6,0	-4,9	-5,1	-4,1	e		-0,9	-2,0	2,4	-1,5	1,4	10,5	9,0				
e		-25,0	-19,5	-6,6	-3,3	-3,9	-1,3	-3	a – dynamic of growth of Gross Domestic Product (GDP) [%]												
a	Tajikistan	5,2	3,8	8,3	10,2	9,1	10,2	10,6	b	b – the rate of unemployment [%]											
b		3,2	3	2,7	2,4	2,7	2,5	2,2	c	c – the rate of inflation [%]											
c		2,7	30,1	60,8	12,5	14,5	13,7	5,6	d	d – the rate of budget balance to GDP [%]											
d		-3,8	-3,1	-5,6	-3,2	-2,5	-1,8	-4,1	e	e – the rate of current account balance to GDP [%]											
e		-9,1	-3,4	-6,4	-7,0	-2,7	-1,2	-2,2													

Source: [2], [3], [4]

Table 2: Indicators of macroeconomic stabilisation

<i>Id</i>	<i>Country</i>	<i>1998</i>	<i>1999</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>Id</i>	<i>Country</i>	<i>1998</i>	<i>1999</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>			
<b>Central Europe</b>																				
A	Poland	0,2124	0,1883	0,1745	0,1378	0,1367	0,1414	0,1580	B	Macedonia	0,0473	0,0634	0,0650	0,0521	0,0563	0,0331	0,0305			
B		0,3039	0,2743	0,2590	0,2495	0,2495	0,2276	0,2304	C		0,0808	0,0987	0,0968	0,1329	0,1051	0,0544	0,0519			
C		0,2162	0,2532	0,2498	0,2105	0,2244	0,1993	0,1864	D		0,2822	0,3124	0,3442	0,1278	0,1723	0,2712	0,3117			
D		0,1508	0,1613	0,1643	0,1409	0,1473	0,1376	0,1350	E		0,1583	0,2252	0,2495	0,0777	0,0932	0,1680	0,1896			
E		0,1672	0,1461	0,1524	0,1411	0,1454	0,1703	0,1865	psm		0,1415	0,1815	0,1762	0,0911	0,1164	0,1473	0,1374			
psm		1,0506	1,0232	1,0000	0,8798	0,9032	0,8762	0,8962	A	Romania	0,1230	0,1496	0,1867	0,2320	0,2288	0,2380	0,2776			
A	Czech Republic	0,1779	0,1811	0,2091	0,2115	0,2046	0,2188	0,2205	B		0,1975	0,1436	0,1966	0,2438	0,2903	0,3142	0,3417			
B		0,3336	0,3420	0,3367	0,3406	0,3586	0,3563	0,3477	C		0,1127	0,1034	0,1280	0,1597	0,2070	0,2208	0,2617			
C		0,1764	0,2189	0,2074	0,2351	0,0791	0,1544	0,2350	D		0,1112	0,1490	0,1405	0,1391	0,1652	0,1549	0,1657			
D		0,1333	0,1491	0,1333	0,1506	0,0485	0,0903	0,1498	E		0,0891	0,1259	0,1506	0,1658	0,1741	0,1607	0,1739			
E		0,1320	0,1420	0,1514	0,1481	0,1386	0,1484	0,1569	psm		0,6335	0,6715	0,8023	0,9404	1,0655	1,0887	1,2206			
psm		0,9533	1,0330	1,0379	1,0859	0,8294	0,7482	1,1100	<b>Baltic States</b>											
A	Slovakia	0,1728	0,1311	0,1421	0,1427	0,1606	0,1632	0,1698	A	Estonia	0,2203	0,1573	0,2160	0,2115	0,2355	0,2180	0,2305			
B		0,2622	0,2058	0,2325	0,2191	0,2452	0,2348	0,2426	B		0,3246	0,3017	0,2839	0,2964	0,3249	0,3327	0,3229			
C		0,1791	0,1338	0,0000	0,1536	0,1659	0,2028	0,2202	C		0,2964	0,2076	0,2964	0,3138	0,3469	0,3955	0,3482			
D		0,1023	0,0963	0,0000	0,0912	0,0969	0,1574	0,1551	D		0,1710	0,1371	0,1921	0,1997	0,1857	0,1851	0,1637			
E		0,1377	0,1386	0,1503	0,1397	0,1468	0,1824	0,1793	E		0,1476	0,1309	0,1828	0,1712	0,1512	0,1229	0,1244			
psm		0,8542	0,7057	0,5250	0,7463	0,8154	0,9406	0,9669	psm		1,1598	0,9345	1,1712	1,1927	1,2442	1,2541	1,1896			
A	Hungary	0,2302	0,2284	0,2442	0,2340	0,2307	0,2241	0,2355	A	Lithuania	0,2148	0,1317	0,1653	0,1770	0,2062	0,2418	0,2212			
B		0,3079	0,3305	0,3388	0,3478	0,3627	0,3592	0,3610	B		0,2958	0,2874	0,2653	0,2534	0,2997	0,3155	0,3119			
C		0,0669	0,1661	0,2204	0,1676	0,0739	0,1275	0,1695	C		0,2360	0,1737	0,2484	0,2596	0,2809	0,2739	0,2476			
D		0,0491	0,1147	0,1466	0,1213	0,0453	0,0739	0,0992	D		0,1189	0,0881	0,1528	0,1669	0,1724	0,1595	0,1503			
E		0,1659	0,1588	0,1602	0,1648	0,1436	0,1322	0,1400	E		0,1432	0,0948	0,1527	0,1768	0,1769	0,1881	0,1671			
psm		0,8200	0,9986	1,1103	1,0354	0,8562	0,9169	1,0050	psm		1,0087	0,7757	0,9845	1,0337	1,1361	1,1788	1,0982			
<b>South-eastern Europe</b>																				
A	Slovenia	0,2191	0,2408	0,2247	0,2203	0,2278	0,2134	0,2371	B	Latvia	0,1867	0,1740	0,2026	0,2215	0,2129	0,2361	0,2422			
B		0,3384	0,3349	0,3336	0,3533	0,3525	0,3540	0,3657	C		0,2854	0,2819	0,2849	0,2950	0,3068	0,3185	0,3082			
C		0,2455	0,2440	0,2108	0,2297	0,2388	0,2552	0,2617	D		0,2931	0,1760	0,2448	0,2698	0,2458	0,2707	0,2771			
D		0,1865	0,1742	0,1538	0,1793	0,1944	0,1933	0,1962	E		0,1596	0,0988	0,1487	0,1521	0,1483	0,1552	0,1594			
E		0,1765	0,1784	0,1676	0,1729	0,1860	0,1703	0,1871	psm		0,1382	0,1301	0,1708	0,1636	0,1668	0,1622	0,1595			
psm		1,1660	1,1723	1,0905	1,1555	1,1996	1,1862	1,2479	A	Russia	0,1112	0,2085	0,2601	0,2248	0,2276	0,2514	0,2516			
A	Albania	0,1855	0,1790	0,1880	0,1926	0,1727	0,1904	0,1938	B		0,2397	0,1001	0,2267	0,3101	0,2966	0,3082	0,2683			
B		0,2325	0,2551	0,2540	0,2589	0,2606	0,2751	0,2830	C		0,0818	0,0782	0,2756	0,3529	0,2780	0,3027	0,2964			
C		0,0451	0,0236	0,0797	0,0953	0,1073	0,1642	0,1780	D		0,0772	0,2319	0,4336	0,3715	0,2975	0,3084	0,3630			
D		0,0297	0,0136	0,0479	0,0593	0,0609	0,0937	0,1063	E		0,1058	0,2712	0,3467	0,2500	0,2318	0,2577	0,2654			
E		0,1801	0,1690	0,1678	0,1768	0,1424	0,1532	0,1607	psm		0,6156	0,8900	1,5427	1,5092	1,3314	1,4284	1,4447			
psm		0,04663	0,4530	0,4182	0,4537	0,4740	0,5301	0,5048	A	Belarus	0,3090	0,2511	0,2800	0,2657	0,2645	0,2837	0,3429			
A	Bośnia i. Hercegowina	0,0413	0,0372	0,0242	0,0164	0,0155	0,0000	0,0104	B		-0,3413	-0,6336	-0,0315	0,2252	0,2676	0,2960	0,3608			
B		0,1379	0,1392	0,1697	0,2284	0,2573	0,3146	0,2934	C		-0,2506	-0,4130	-0,0246	0,1667	0					

Table 2: continuation.

<i>Id</i>	<i>Country</i>	<i>1998</i>	<i>1999</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>Id</i>	<i>Country</i>	<i>1998</i>	<i>1999</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>					
<i>CIS - Caucasus</i>																						
A	Armenia	0,2432	0,1934	0,2144	0,2637	0,2843	0,2916	0,2701	B	Kyrgyzstan	0,2234	0,2342	0,2501	0,2553	0,2017	0,2738	0,2746					
B		0,3475	0,3173	0,3176	0,3307	0,3201	0,3222	0,3341	C		0,3237	0,2315	0,3466	0,3745	0,3863	0,3735	0,3795					
C		0,1949	0,1247	0,1554	0,2143	0,2966	0,2571	0,3216	D		0,0615	0,0078	0,0635	0,1576	0,1858	0,1767	0,2072					
D		0,0583	0,0504	0,0678	0,1161	0,1819	0,1575	0,2013	E		0,0174	0,0044	0,0416	0,1076	0,1241	0,1303	0,1413					
E		0,0682	0,0969	0,1201	0,1668	0,2127	0,2098	0,1972	psm		0,0532	0,0845	0,1588	0,1769	0,1337	0,1980	0,1915					
nsm		0,9320	0,7827	0,8752	1,0916	1,2954	1,2382	1,3243	psm		0,6792	0,5623	0,8605	1,0719	1,0315	1,1523	1,1940					
A	Azerbaijan	0,3377	0,3056	0,3501	0,3320	0,3332	0,3456	0,3352	B	Tajikistan	0,2654	0,2507	0,3048	0,3293	0,3140	0,3284	0,3356					
B		0,4631	0,4315	0,4199	0,4229	0,4207	0,4128	0,3824	C		0,3972	0,2869	0,1621	0,3646	0,3536	0,3587	0,3953					
C		0,2350	0,1986	0,2975	0,3508	0,3006	0,2782	0,3048	D		0,2150	0,1672	0,0683	0,2070	0,2178	0,2356	0,2012					
D		0,0258	0,0917	0,1980	0,2508	0,1472	0,0477	0,0643	E		0,1200	0,1567	0,1038	0,1382	0,1704	0,1906	0,1447					
E		0,0380	0,1357	0,2181	0,2237	0,1530	0,0548	0,0609	psm		0,1450	0,1643	0,1804	0,1896	0,2086	0,2266	0,2234					
nsm		1,0995	1,1630	1,4835	1,5802	1,3548	1,1391	1,1475	psm		1,1426	1,0257	0,8194	1,2287	1,2644	1,3399	1,3002					
A	Georgia	0,1830	0,1814	0,1860	0,2068	0,2141	0,2368	0,2133	B	Turkmenistan	0,3059	0,4260	0,4532	0,4755	0,4681	0,4322	0,3158					
B		0,2900	0,2747	0,3182	0,3141	0,3056	0,2701	0,2667	C		0,3544	0,3482	0,4092	0,3902	0,4075	0,4167	0,3810					
C		0,1665	0,1297	0,2034	0,2587	0,2590	0,2273	0,3126	D		0,0000	0,0522	0,3158	0,2666	0,3318	0,2593	0,1983					
D		0,0963	0,0816	0,1354	0,1591	0,1664	0,1418	0,1961	E		0,0000	0,0646	0,4300	0,3486	0,4441	0,3816	0,2217					
E		0,1292	0,1355	0,1455	0,1552	0,1633	0,1943	0,1763	psm		0,8625	1,1431	1,8948	1,7794	1,9511	1,7473	1,3431					
nsm		0,8650	0,8029	0,9885	1,0938	1,1085	1,0703	1,1650	A	Uzbekistan	0,2465	0,2625	0,2600	0,2711	0,2588	0,2398	0,3093					
									B		0,3235	0,3239	0,3143	0,3222	0,3432	0,4050	0,3871					
<i>CIS - Central Asia</i>																						
A	Kazakhstan	0,1680	0,2179	0,2443	0,2879	0,2651	0,2663	0,2714	C		0,1729	0,1866	0,1885	0,1952	0,2201	0,2807	0,2356					
B		0,3654	0,3088	0,2835	0,3053	0,3227	0,3270	0,3299	D		0,1648	0,1721	0,2019	0,1836	0,2104	0,2824	0,2407					
C		0,1097	0,1517	0,2656	0,2774	0,2926	0,4137	0,3517	E		0,1629	0,1681	0,1877	0,1761	0,1820	0,2084	0,2597					
D		0,0684	0,1296	0,2398	0,1906	0,2080	0,3173	0,2714	psm		1,0706	1,1132	1,1525	1,1481	1,2145	1,4163	1,4324					
E		0,1134	0,1673	0,2612	0,2332	0,2111	0,2248	0,2270	D		A – indicators of <i>real sphere</i> ; B – indicators of <i>stagflation</i> ; C – indicators of <i>budget and inflation</i>											
nsm		0,8249	0,9753	1,2943	1,2945	1,2996	1,5490	1,4514	A		D – indicators of <i>finances balance</i> ; E – indicators of <i>external sector</i> ;											
									B		psm – integrated indicators of macroeconomic stabilisation											

Source: own elaboration

Table 3: The ranking of countries on the base of indicators of macroeconomic stabilisation

<i>Lp</i>	<i>Country</i>	<i>1998</i>	<i>1999</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>Lp</i>	<i>Country</i>	<i>1998</i>	<i>1999</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>
<b>Ranking of countries on the base indicators of real sphere</b>																	
<b>Central Europe</b>																	
1	Poland	12	13	21	23	24	24	24	16	Russia	24	10	6	13	14	9	11
2	Czech Republic	18	15	14	16	18	17	18	17	Belarus	2	4	4	7	7	6	1
3	Slovakia	19	24	24	22	22	22	22	18	Moldova	23	22	16	10	5	10	12
4	Hungary	7	8	10	11	11	16	15	19	Ukraine	17	11	5	4	8	4	2
<b>South-eastern Europe</b>																	
5	Slovenia	10	6	11	15	13	19	14	20	Armenia	6	12	13	8	4	5	10
6	Albania	14	16	17	19	20	20	21	21	Azerbaijan	1	2	2	2	2	2	4
7	Bosnia & Herzegovina	27	26	27	27	27	27	27	22	Georgia	16	14	19	18	15	14	19
8	Bulgaria	20	19	20	21	21	21	20									
9	Croatia	15	21	23	24	23	23	23	23	Kazakhstan	21	9	9	5	6	8	9
10	Serbia & Montenegro	25	27	25	25	25	25	25	24	Kyrgyzstan	8	7	8	9	19	7	8
11	Macedonia	26	25	26	26	26	26	26	25	Tajikistan	4	5	3	3	3	3	3
12	Romania	22	20	18	12	12	13	7	26	Turkmenistan	3	1	1	1	1	1	5
<b>Baltic States</b>																	
13	Estonia	9	18	12	17	10	18	16	27	Uzbekistan	5	3	7	6	9	12	6
14	Lithuania	11	23	22	20	17	11	17									
15	Latvia	13	17	15	14	16	15	13									
<b>Ranking of countries on the base indicators of stagflation</b>																	
<b>Central Europe</b>																	
1	Poland	14	16	16	19	21	24	24	16	Russia	21	23	21	13	17	16	20
2	Czech Republic	7	3	5	9	6	8	10	17	Belarus	27	27	27	22	19	18	8
3	Slovakia	20	20	20	23	22	23	23	18	Moldova	18	21	11	8	7	17	15
4	Hungary	12	5	4	7	5	6	7	19	Ukraine	11	7	10	3	3	5	9
<b>South-eastern Europe</b>																	
5	Slovenia	6	4	6	6	9	9	6	20	Armenia	5	8	8	10	13	12	12
6	Albania	22	17	17	17	20	20	19	21	Azerbaijan	1	1	1	1	1	2	3
7	Bosnia & Herzegovina	26	26	25	27	27	27	27	22	Georgia	16	15	7	12	15	21	21
8	Bulgaria	19	18	19	21	23	19	18									
9	Croatia	13	13	18	24	24	22	22	23	Kazakhstan	3	9	14	14	12	11	13
10	Serbia & Montenegro	24	25	26	26	25	25	25	24	Kyrgyzstan	9	19	3	4	4	4	5
11	Macedonia	25	24	24	25	26	26	26	25	Tajikistan	2	12	23	5	8	7	1
12	Romania	23	22	22	20	18	15	11	26	Turkmenistan	4	2	2	2	2	1	4
<b>Baltic States</b>																	

Table 3: continuation

Table 3: continuation

Lp	Country	1998	1999	2000	2001	2002	2003	2004	Lp	Country	1998	1999	2000	2001	2002	2003	2004	
<b>Ranking of countries on the base integrated indicators of macroeconomic stabilisation</b>																		
<b>Central Europe</b>										<b>CIS Eastern Europe</b>								
1	Poland	9	8	14	21	19	22	23	16	Russia	24	13	2	3	4	4	2	
2	Czech Republic	12	6	11	14	21	24	18	17	Belarus	27	27	24	18	14	12	5	
3	Slovakia	16	20	25	24	22	19	21	18	Moldova	23	23	13	6	9	9	12	
4	Hungary	18	10	8	16	20	20	20	19	Ukraine	11	5	5	4	2	3	4	
<b>South-eastern Europe</b>										<b>CIS - Caucasus</b>								
5	Slovenia	2	1	9	9	11	10	9	20	Armenia	13	17	18	13	6	8	7	
6	Albania	21	22	23	22	24	21	22	21	Azerbaijan	5	2	3	2	3	15	16	
7	Bosnia & Herzegovina	26	25	26	27	27	27	27	22	Georgia	14	16	15	12	13	17	15	
8	Bulgaria	1	9	12	19	17	18	10	<b>CIS - Central Asia</b>									
9	Croatia	6	18	22	23	23	23	24	23	Kazakhstan	17	11	4	5	5	2	1	
10	Serbia & Montenegro	25	26	27	25	25	26	26	24	Kyrgyzstan	20	24	19	15	18	13	13	
11	Macedonia	19	14	17	26	26	25	25	25	Tajikistan	4	7	20	7	7	6	8	
12	Romania	22	21	21	20	16	16	11	26	Turkmenistan	15	3	1	1	1	1	6	
<b>Baltic States</b>										27	Uzbekistan	7	4	7	10	10	5	3
13	Estonia	3	12	6	8	8	7	14										
14	Lithuania	10	19	16	17	12	11	19										
15	Latvia	8	15	10	11	15	14	17										

Source: own elaboration

Table 4: Leaders i outsiders of the full list

	<b>Indicators</b>	1998	1999	2000	2001	2002	2003	2004
<b>Leaders</b>								
A	Real sphere (A)	Azerbaijan	Turkmenistan	Turkmenistan	Turkmenistan	Turkmenistan	Turkmenistan	Belarus
B	Stagflation	Azerbaijan	Azerbaijan	Azerbaijan	Azerbaijan	Azerbaijan	Turkmenistan	Tajikistan
C	Budget and inflation	Bulgaria	Macedonia	Macedonia	Russia	Estonia	Kazakhstan	Kazakhstan
D	Finances balance	Bulgaria	Russia	Russia	Russia	Turkmenistan	Kazakhstan	Russia
E	External sector	Bulgaria	Russia	Turkmenistan	Turkmenistan	Turkmenistan	Turkmenistan	Ukraine
psm	integrated indicators of macroeconomic stabilisation	Bulgaria	Slovenia	Turkmenistan	Turkmenistan	Turkmenistan	Turkmenistan	Kazakhstan
<b>Outsiders</b>								
A	Real sphere (A)	Bosnia & Herzegovina	Serbia & Montenegro	Bosnia & Herzegovina				
B	Stagflation	Belarus	Belarus	Belarus	Bosnia & Herzegovina	Bosnia & Herzegovina	Bosnia & Herzegovina	Bosnia & Herzegovina
C	Budget and inflation	Belarus	Belarus	Serbia & Montenegro	Albania	Hungary	Czech Republic	Hungary
D	Finances balance	Turkmenistan	Kyrgyzstan	Slovakia	Albania	Hungary	Czech Republic	Azerbaijan
E	External sector	Turkmenistan	Serbia & Montenegro	Armenia	Macedonia	Bosnia & Herzegovina	Azerbaijan	Azerbaijan
psm	integrated indicator of macroeconomic stabilisation	Belarus	Belarus	Serbia & Montenegro	Bosnia & Herzegovina	Bosnia & Herzegovina	Bosnia & Herzegovina	Bosnia & Herzegovina

Source: own elaboration

Table 5: Leaders i outsiders selected group of countries

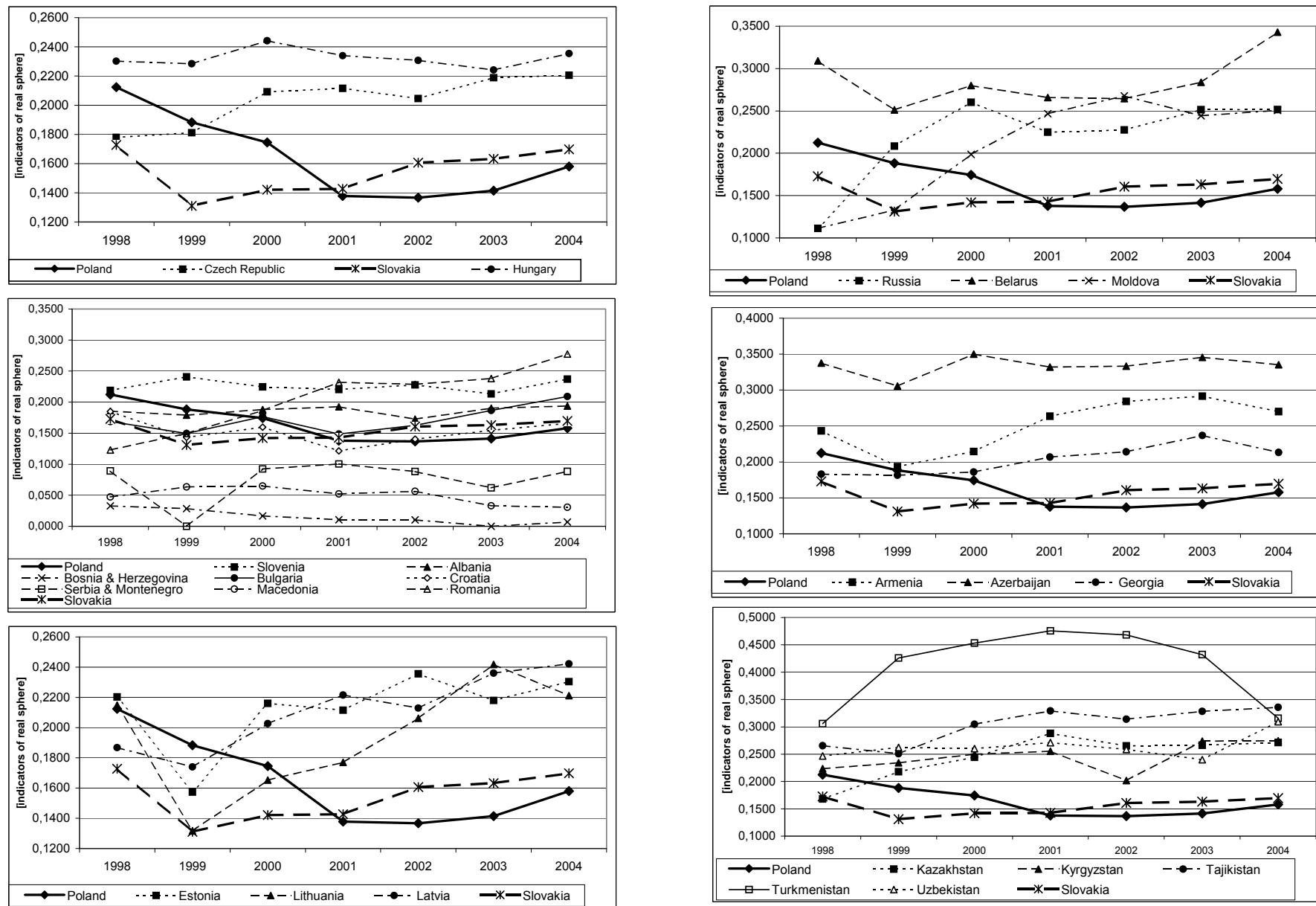
	<b>Indicators</b>	1998	1999	2000	2001	2002	2003	2004
<b>Central Europe</b>								
<b>Leaders</b>								
A	Real sphere	Hungary	Hungary	Hungary	Hungary	Hungary	Hungary	Hungary
B	Stagflation	Czech Republic	Czech Republic	Hungary	Hungary	Hungary	Hungary	Hungary
C	Budget and inflation	Poland	Poland	Poland	Czech Republic	Poland	Slovakia	Czech Republic
D	Finances balance	Poland	Poland	Poland	Czech Republic	Poland	Slovakia	Slovakia
E	External sector	Poland	Hungary	Hungary	Hungary	Slovakia	Slovakia	Poland
psm	Integrated indicator of macroeconomic stabilisation	Poland	Czech Republic	Hungary	Czech Republic	Hungary	Slovakia	Czech Republic

Table 5: continuation

Table 5: continuation

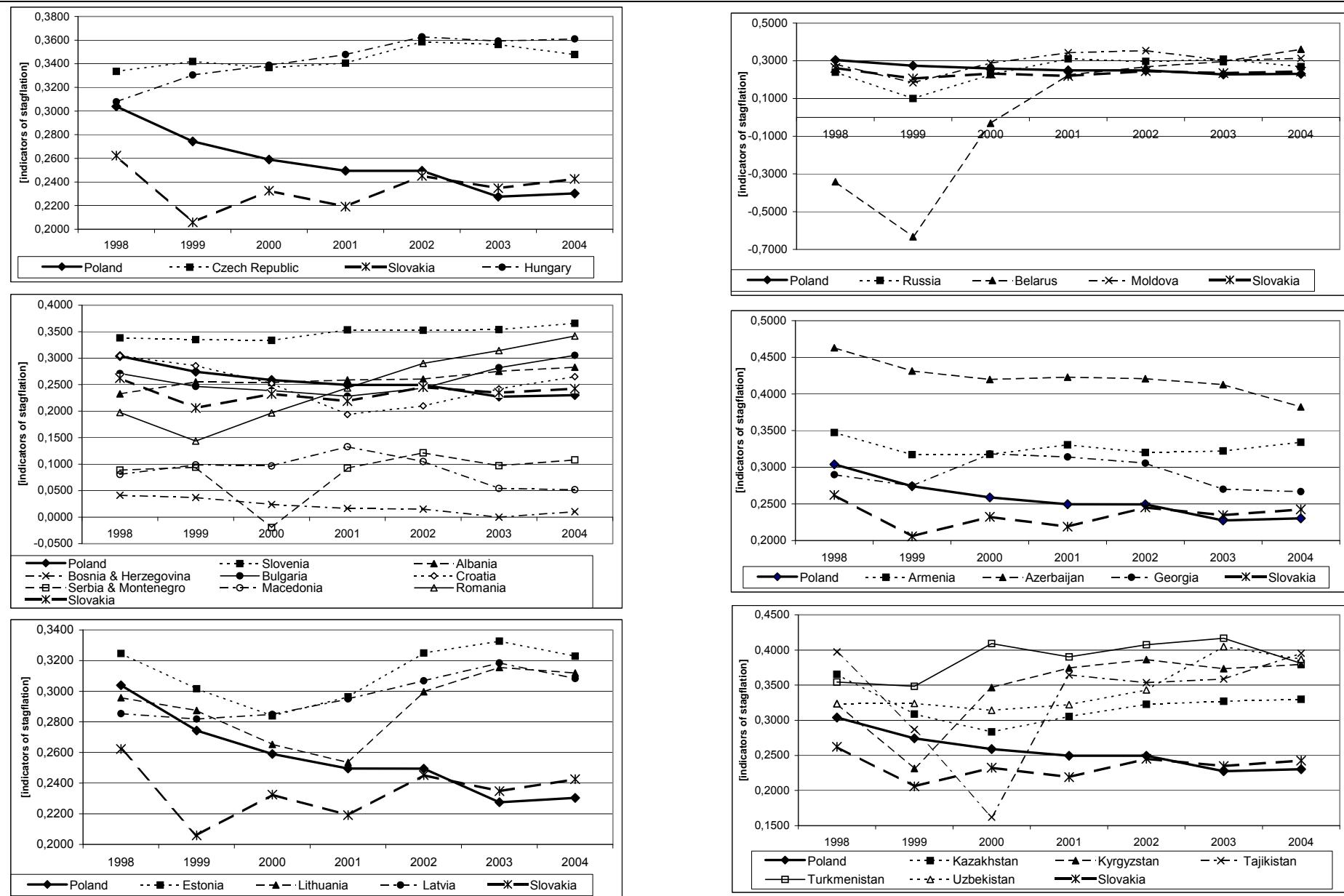
	<i>Indicators</i>	1998	1999	2000	2001	2002	2003	2004
<b>CIS - Caucasus</b>								
<b>Leaders</b>								
A	Real sphere	Azerbaijan	Azerbaijan	Azerbaijan	Azerbaijan	Azerbaijan	Azerbaijan	Azerbaijan
B	Stagflation	Azerbaijan	Azerbaijan	Azerbaijan	Azerbaijan	Azerbaijan	Azerbaijan	Azerbaijan
C	Budget and inflation	Azerbaijan	Azerbaijan	Azerbaijan	Azerbaijan	Azerbaijan	Azerbaijan	Armenia
D	Finances balance	Georgia	Azerbaijan	Azerbaijan	Azerbaijan	Armenia	Armenia	Armenia
E	External sector	Georgia	Azerbaijan	Azerbaijan	Azerbaijan	Armenia	Armenia	Armenia
psm	Integrated indicator of macroeconomic stabilisation	Azerbaijan	Azerbaijan	Azerbaijan	Azerbaijan	Azerbaijan	Armenia	Armenia
<b>Outsiders</b>								
A	Real sphere	Georgia	Georgia	Georgia	Georgia	Georgia	Georgia	Georgia
B	Stagflation	Georgia	Georgia	Armenia	Georgia	Georgia	Georgia	Georgia
C	Budget and inflation	Georgia	Armenia	Armenia	Armenia	Georgia	Georgia	Azerbaijan
D	Finances balance	Azerbaijan	Armenia	Armenia	Armenia	Azerbaijan	Azerbaijan	Azerbaijan
E	External sector	Azerbaijan	Armenia	Armenia	Georgia	Azerbaijan	Azerbaijan	Azerbaijan
psm	Integrated indicator of macroeconomic stabilisation	Georgia	Armenia	Armenia	Armenia	Georgia	Georgia	Azerbaijan
<b>CIS - Central Asia</b>								
<b>Leaders</b>								
A	Real sphere	Turkmenistan	Turkmenistan	Turkmenistan	Turkmenistan	Turkmenistan	Turkmenistan	Tajikistan
B	Stagflation	Tajikistan	Turkmenistan	Turkmenistan	Turkmenistan	Turkmenistan	Turkmenistan	Tajikistan
C	Budget and inflation	Tajikistan	Turkmenistan	Turkmenistan	Turkmenistan	Turkmenistan	Kazakhstan	Kazakhstan
D	Finances balance	Uzbekistan	Uzbekistan	Turkmenistan	Turkmenistan	Turkmenistan	Kazakhstan	Kazakhstan
E	External sector	Uzbekistan	Uzbekistan	Turkmenistan	Turkmenistan	Turkmenistan	Turkmenistan	Uzbekistan
psm	Integrated indicator of macroeconomic stabilisation	Tajikistan	Turkmenistan	Turkmenistan	Turkmenistan	Turkmenistan	Turkmenistan	Kazakhstan
<b>Outsiders</b>								
A	Real sphere	Kazakhstan	Kazakhstan	Kazakhstan	Kyrgyzstan	Kyrgyzstan	Uzbekistan	Kazakhstan
B	Stagflation	Uzbekistan	Kyrgyzstan	Tajikistan	Kazakhstan	Kazakhstan	Kazakhstan	Kazakhstan
C	Budget and inflation	Kyrgyzstan	Kyrgyzstan	Kyrgyzstan	Kyrgyzstan	Kyrgyzstan	Kyrgyzstan	Tajikistan
D	Finances balance	Kyrgyzstan	Kyrgyzstan	Kyrgyzstan	Kyrgyzstan	Kyrgyzstan	Kyrgyzstan	Kyrgyzstan
E	External sector	Turkmenistan	Turkmenistan	Kyrgyzstan	Uzbekistan	Kyrgyzstan	Kyrgyzstan	Kyrgyzstan
psm	Integrated indicator of macroeconomic stabilisation	Kyrgyzstan	Kyrgyzstan	Tajikistan	Kyrgyzstan	Kyrgyzstan	Kyrgyzstan	Kyrgyzstan

Source: own elaboration



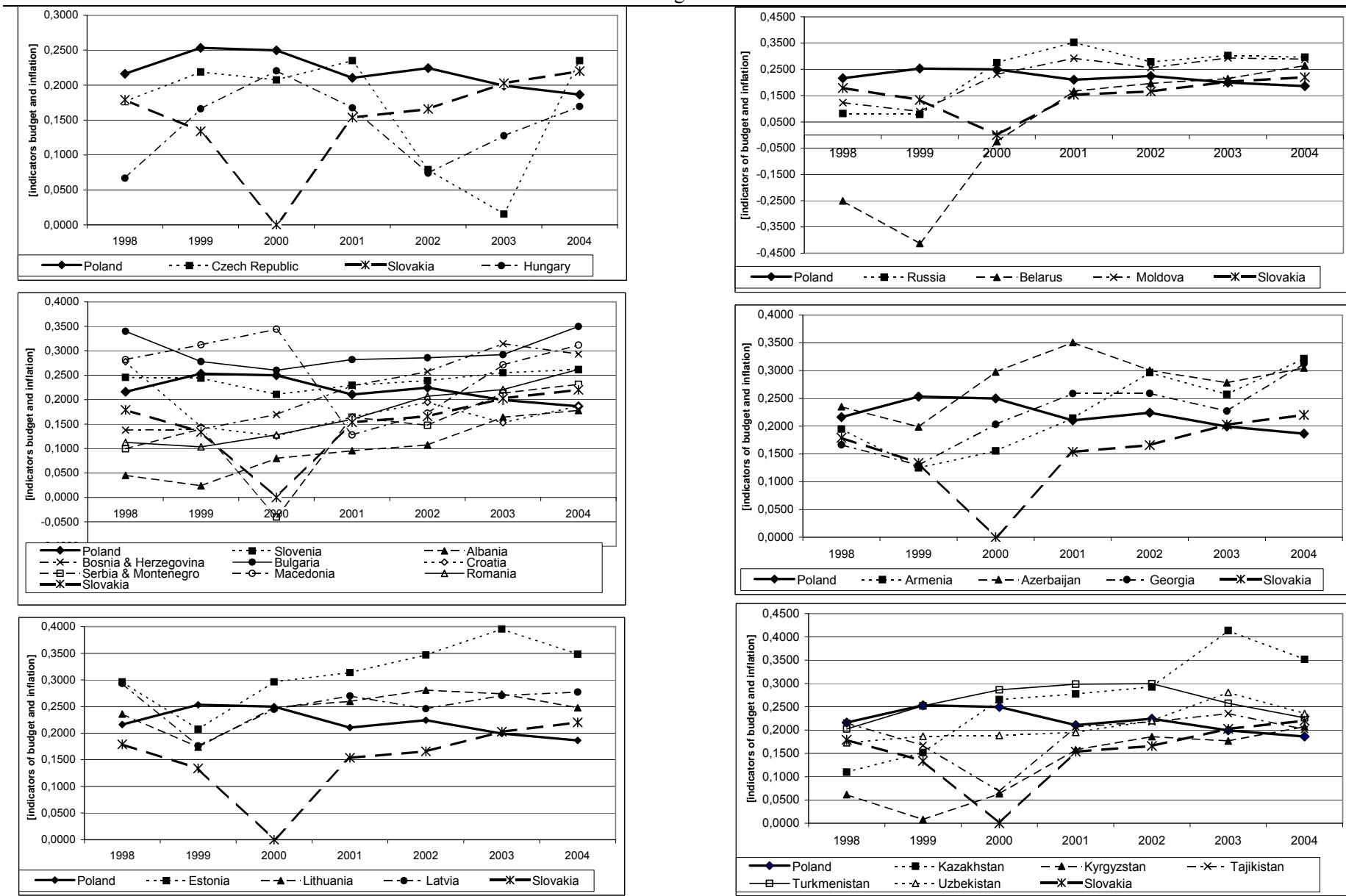
Picture 1: Compare the values of indicators of real sphere for group of countries

Source: own elaboration



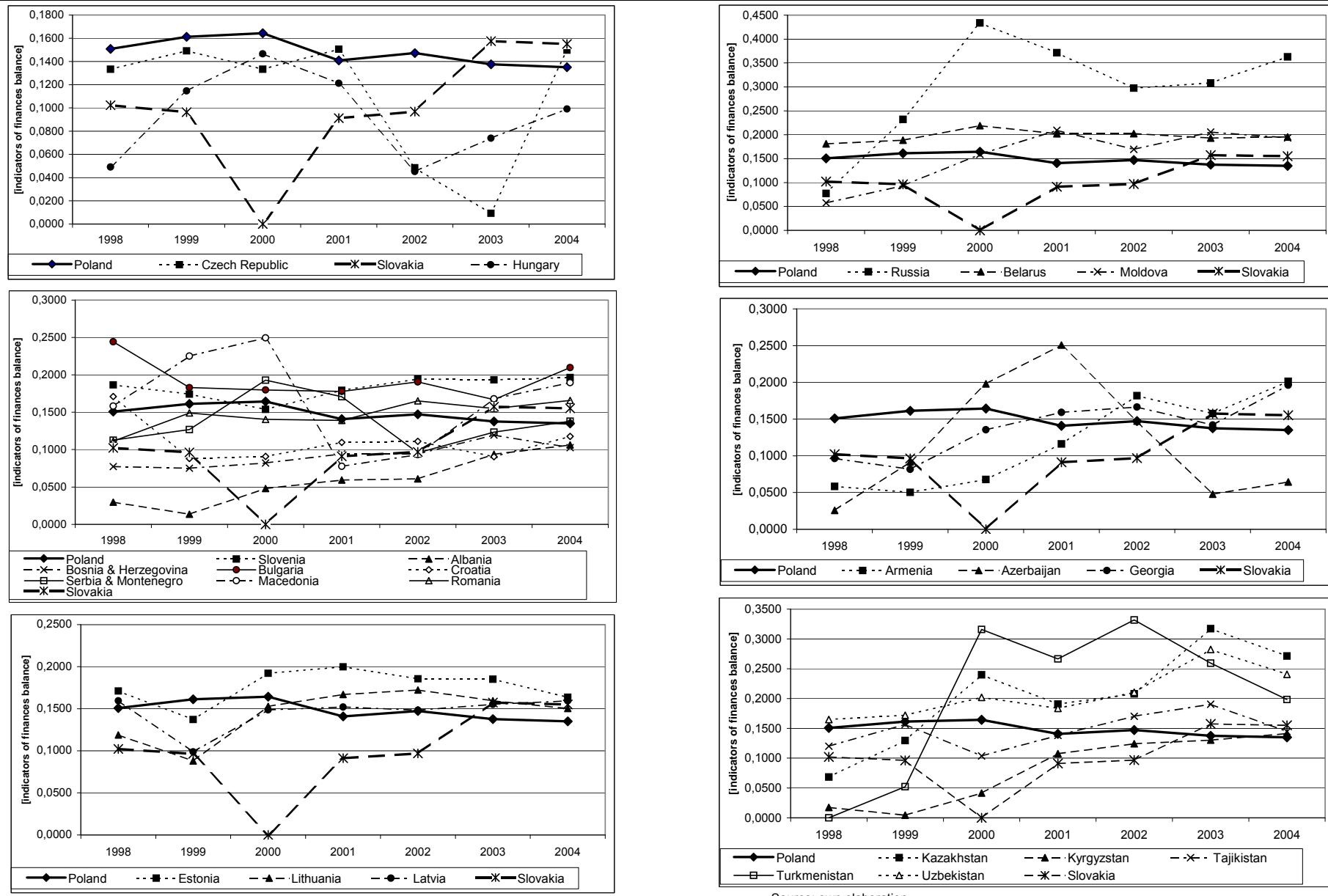
Picture 2: Compare the values of indicators of stagflation for group of countries

Source: own elaboration



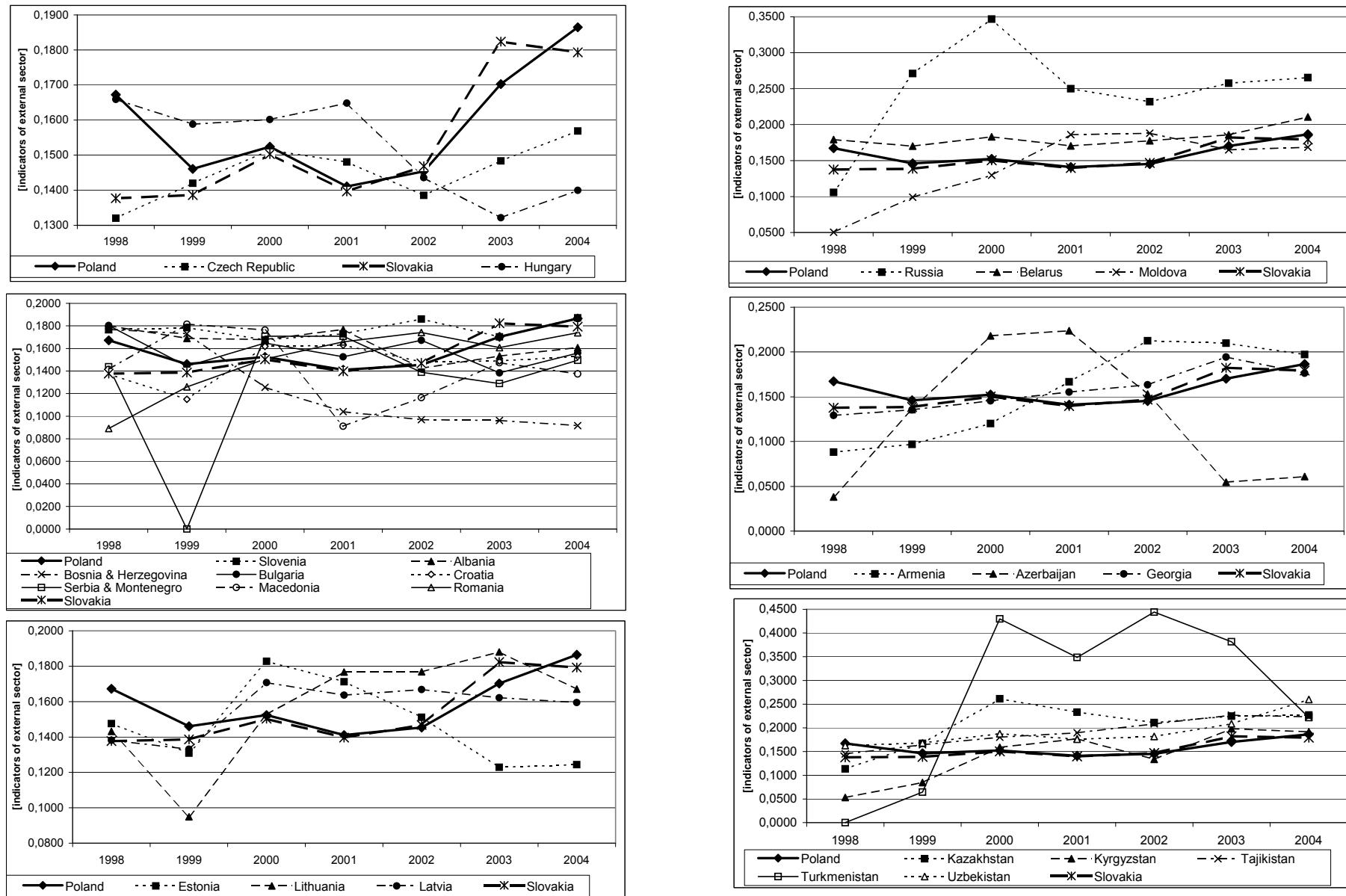
Source: own elaboration

Picture 3: Compare the values of indicators of budget and inflation



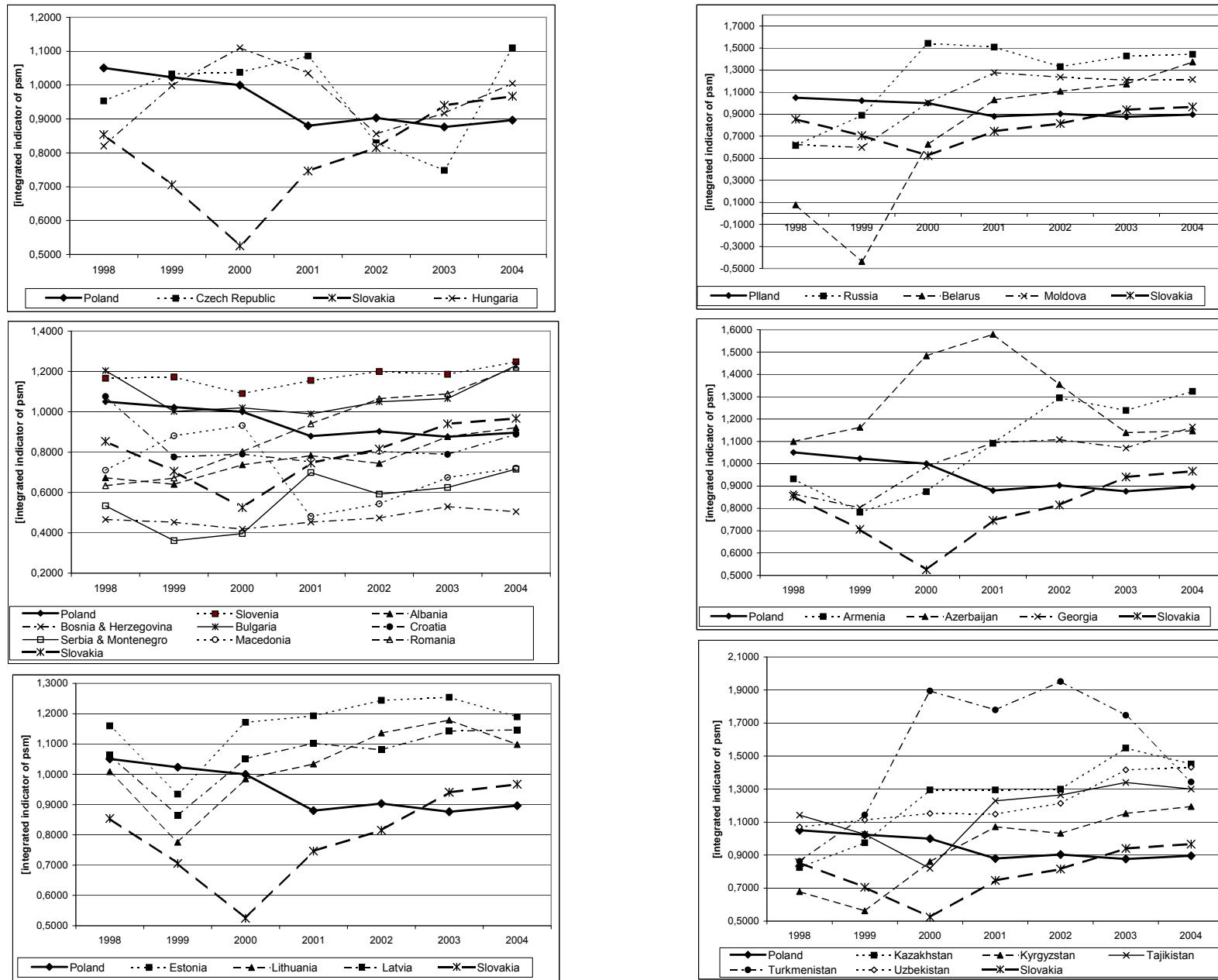
Source: own elaboration

Picture 4: Compare the values of indicators of finances balance



Source: own elaboration

Picture 5: Compare the values of indicators of external sector



Picture 6: Compare the values of integrated indicators of psm

Source: own elaboration