



Jacek Pietrucha

Department of Economics
University of Economics in Katowice
jacek.pietrucha@ue.katowice.pl

Exchange rate regime and external adjustment in CEE countries

Abstract

The paper reviews effects of exchange rate regime's choice for adjustments processes in current accounts (CA) in the Central and Eastern Europe countries between 2008-2012. During the period of global financial crisis, Poland may be treated as a handbook example of the reaction of floating exchange rate to shock and adjustments in the form of expenditure switching. However, the Polish experience is not typical among the Central and Eastern Europe countries. There is no evidence for the positive role of floating exchange rate in macroeconomic adjustments after the crisis in Central and Eastern Europe countries which belong to EU. The adjustments in the countries with fixed regimes were fast and deep. The real exchange rate decreased and export, CA and goods and services balance improved, development distance against EU countries was reduced. However, the experience of Baltic countries, which have internal devaluation, should be very carefully conveyed to other countries.

Keywords: current account, exchange rate, balance of payment, transition.

JEL Classification: E65, F31, F32.

Introduction

The course of economic crisis in CEE countries after 2007 renewed the discussion about proper solutions within the choice of exchange rate regime from the perspective of macroeconomic adjustment. The aim of this article is to conduct the analysis of the effects of exchange rate regime's embrace for adjustments processes in current accounts (CA) in the Central and Eastern Europe countries which belonged to the European Union between 2008-2012, i.e. within

the period of global financial crisis and afterwards, during secondary shock in the form of crisis in the euro zone.

Poland can constitute a very explicit example of a country in which floating exchange rate contributed to the mitigation of negative effects of a global financial crisis. However, while examining the whole group of CEE countries, it happens that the Polish experience is not a classic one.

The paper is organized as follows. The next section reviews literature within the scope of the role of exchange rate regime in external balance adjustment, section 2 discusses the reaction of Polish economy on crisis, section 3 discusses exchange rate mechanisms and external adjustments in CEE countries.

1. The exchange rate as adjusting instrument

From a theoretical point of view, there is no consensus on which exchange rate regime is more favorable to macroeconomic performance. Proponents of fixed exchange rate regimes argue that exchange rate stability promotes economic performance through higher trade and enhanced macroeconomic stability, which could favor foreign investment and growth. Proponents of flexible exchange rate regimes emphasize the advantage of exchange rate flexibility to correct for domestic and external disequilibria in the face of real shocks.

The main channel through which real exchange rate (RER) cause current account changes is an “expenditure switching” effect captured by the IS curve in the variations of the traditional Fleming–Mundell model. In standard model the RER moves to facilitate adjustment to a CA imbalance, regardless of whether the nominal exchange rate regime is fixed or flexible. Following a shock to external demand that creates a CA deficit, the RER will depreciate either through nominal exchange rate depreciation or through a drop in domestic inflation, thus improve competitiveness, increase exports and moderate imports.

M. Friedman argues that a flexible exchange rate would adjust in response to external real shocks and thus help insulate the domestic economy. Friedman notes that the speed at which relative prices would adjust depends crucially on the exchange rate regime (Friedman 1953). Since then, a number of theories have confirmed Friedman’s original intuition and it has become one of the strongest arguments in favor of flexible exchange rate regimes.

In the Mundell–Fleming–Dornbusch model, floating exchange rates are superior to fixed exchange rates when real shocks are the dominant source of disturbance to the economy. With a shock to the demand or supply of domestic output, the prices of domestic goods and factors must adjust. Because these pric-

es are sticky, especially downwards, the economy gradually, and often at great cost, adjusts to its new long-run equilibrium. The opposite is true for a floating exchange rate regime: following a real shock, the adjustment to a new equilibrium is immediate, reached by a movement of the exchange rate, which eliminates the need for a change in the price level.

Fixing of nominal exchange rate, either in the form of currency board or as resignation from independent monetary and exchange rate policy, e.g. as a result of the adoption of common currency is considered as a cost. The proper change of real exchange rate may occur only via the changes of relative prices (including relative unit labor costs). Such internal devaluation requires applying some instruments of economic policy which are other than monetary policy (the policy of exchange rate), especially budget and structural policy. Such adjustments are connected with numerous costs (GDP decrease, unemployment growth). The activities, which are aimed at internal devaluation, may bring effect, however, they carry political and social costs (Germany in a moderate scale at the beginning of the 21st century, Greece just after its latest crisis).

Regardless of the above, the use of nominal exchange rate towards the improvement of price competitiveness may come across the following barriers:

- it will be inefficient while long-term when non-price competitiveness is a reason for low competitiveness; depreciation/devaluation may be understood at most as the instrument temporarily sustaining demand and production just after the emergence of shock, but not as the instrument of long-term maintenance of economy competitiveness¹;
- the change of nominal exchange rate evokes an appropriate reaction of country's price level (devaluation evokes inflationary pressure) and simultaneously the final change of real exchange rate may be lower than the change of nominal one;
- if devaluation is usually used as the instrument of balance restoration, it may be durably considered among inflation's expectations. Simultaneously, the short-term effects of the decrease of national currency value will not emerge;
- nominal devaluation may introduce additional costs if external debt emerges (both private and public); it is a frequent case in countries with low developed financial systems and lower GDP per capita; devaluation, by the growth of credit burdens, will lead to financial and sovereign crisis.

¹ Greece of the eighties may be an example here. Numerous devaluations of drachma were used to improve low economy's competitiveness. However, within the longer period, it contributed to the growth of macroeconomic imbalances and conducted the maintenance of structural and institutional features of Greek economy which are responsible for low competitiveness.

Positive role of exchange rate in adjustment processes of balance of payments is not empirically fully confirmed. M. Chinn and S. Wei (2008) claimed that the regime of exchange rate, in case of external imbalance, does not have any meaning for adoptive processes. While examining 170 countries between 1971-2005, M. Chin and S. Wei came to a conclusion that adoptive processes in current account are not dependent from the exchange rate regime. Nevertheless, A. Ghosh, M. Qureshi and C. Tsangarides (2013) notice that standard classifications (both de jure and de facto) of exchange rate mechanisms skip the fact that the variability of exchange rate may be different against particular trade partners. After having taken this fact into consideration, they obtained statistically significant influence of exchange rate on adoptive processes in current turnover account (especially for countries with fully-fledged economies).

P. Lane G. Milesi-Ferretti (2012) examined process of external adjustment in 65 countries between 2007-2010. They find that external adjustment in deficit countries was achieved primarily through demand compression, rather than by expenditure switching. They analyzed the reaction of real exchange rate, domestic demand and GDP. They came to a conclusion that after the crisis, exchange rate adjustment played at most a very modest role in the external adjustment process. O. Gervais, L. Schembri and L. Suchanek (2011) claim that the changes of real exchange rate contribute to faster adjustments in current account. Nevertheless, the change of real exchange rate in countries with emerging economy and adjustments in current account usually happens by way of currency crisis. Furthermore, as far as 11 countries of Central and Eastern Europe are concerned, S. Herrman (2009) claimed that flexibility of exchange rate contribute to the acceleration of adjustments in current account. It is worth noticing that in the above-mentioned surveys, real exchange rate is the subject of interest. Hence, there is no answer to the following question: should adjustments be carried out by way of the change of nominal exchange rate or prices and labor costs?

2. The Polish economy in the period of global crisis

In the period of global financial crisis, Polish zloty experienced significant depreciation in nominal categories. The daily rate for Euro to Polish zloty changed from the level of 3.20 (in July 2008) to 4.88 (in February 2009) and then stabilized and maintained at a level between 4.1-4.2. Its depreciation was also visible in the categories of nominal effective exchange rate (NEER) and real effective exchange rate (REER) deflated with unit labor costs (Table 1).

The significant decrease of Polish zloty contributed to the sustenance of aggregated demand. The slighter decrease of export against the decrease of import meant positive contribution of net export change against GDP (Table 1). Furthermore, within subsequent years, the balance of goods and services was more favorably than in the period before the breakdown of crisis. However, just after temporary improvement in 2009, current account balance returned to its level from before crisis (the result of income balance). During the period of global financial crisis, Poland may be treated as a handbook example of the reaction of floating exchange rate to shock and adjustments in the form of expenditure switching.

While discussing the reaction of Polish economy towards the crisis, the following additional issues, which decided about its scale and the nature of adjustments, should be included:

- relatively slight macroeconomic imbalances during the period before the crisis (e.g. smaller credit growth, consumption, etc.) compared with other region countries (especially Baltic ones);
- relatively small openness of economy which decreases relative meaning of crisis transmission by way of trade channel;
- relatively small foreign exposure of Polish banking system which limited the transmission of financial shock²;
- a strong positive fiscal impulse that comes from the entry of the previously planned cuts of tax burdens into force (personal income tax, national insurance contributions) and the growth of expenses; public income remained at a lower level despite the decision about the growth of VAT rate; as a result, finances deficit reached the level about 8% of GDP; it was one of the highest values in EU and OECD despite the lack of recession;
- the growth of public investments that results from "EURO 2012 effect", the absorption of European Union funds and some big infrastructural projects that are connected to them; generally investments as GDP proportion rose from the level of 18-19% GDP from the period before crisis to 21-22% GDP between 2007-2009 and public investments rose from 3-4% GDP before crisis to 5-6% GDP in the subsequent period.

² The participation of foreign banks in the assets of Polish banking system is significant (although it was falling down within the last few years). However, Polish banks were not engaged with the transactions of instruments which contributed to crisis transmission (ABS in the first phase, the bonds of euro zone's peripheral countries in the second phase). According to National Bank of Poland, the behavior of mother-banks against daughter-banks in Poland was a key issue for the transmission of financial shock (NBP 2008). Nevertheless, it did not jeopardize the stability of Polish banking system.

Table 1. Poland – basic macroeconomic data

Specification	2007	2008	2009	2010	2011	2012
Export (percentage change on previous year)	-9,1	7,1	-6,8	12,1	7,7	3,9
Import (percentage change on previous year)	13,7	8,0	-12,4	13,9	5,5	-0,7
External balance of goods and services/GDP	-2,9	-4,0	0,1	-1,2	-1,2	0,3
CA balance/GDP	-6,2	-6,6	-3,9	-5,1	-5,0	-3,7
EUR/PLN (end of the year)	3,7837	3,5121	4,3276	3,9947	4,1206	4,1847
NEER (2008 = 100)	91,6	100,0	82,3	87,4	84,9	82,6
REER (2008 = 100)	88,7	100,0	80,7	87,3	84,4	81,3
Investment/GDP	21,6	22,3	21,2	19,9	20,2	19,1
Public investment/GDP	4,2	4,6	5,2	5,6	5,7	4,6
Public expenditures/GDP	42,2	43,2	44,6	45,4	43,4	42,2
Public incomes/GDP	40,3	39,5	37,2	37,5	38,4	38,3
General government balance/GDP	-1,9	-3,7	-7,5	-7,9	-5,0	-3,9
GDP growth	6,8	5,1	1,6	3,9	4,5	1,9
GDP per capita (EU 15 = 100)	48,7	50,7	54,8	56,7	58,7	60,0

Source: Eurostat (access: 30.01.2014).

The depreciation of Polish zloty not only brought adjustments in the period of crisis, it also brought a few costs and threats. The depreciation of Polish zloty was one of the factors of inflation pressure in Poland between 2011–2012 (it strengthened supply shock connected with the growth of primary commodities' prices). The inflation arose to the level of 5% what resulted in the growth of National Bank of Poland's main interest rate from 3.5% in 2010 to 4.75% in May 2012 (increasing their significant inequality against EBC and FED). National Bank of Poland did not apply unconventional instruments of monetary policy (as there was no need and possibility) and acceded to significant markdowns of interest rates only in 2013 (till the level of 2.5% in July 2013).

The other negative effect of depreciation was the growth of credit burdens. Especially in cases of mortgage credits, the contribution of credits in foreign currency in Poland was significant. Until 2008, credits in foreign currencies constituted 40%-60% of newly granted credits on the purchase of real property. The stronger depreciation may be dangerous to the stability of banking system and may evoke financial crisis (crisis in a real sector as a consequence). Despite the lack of crisis and restraints of supply of new credits in foreign currencies from 2013, the problem's scale is still significant (credits in foreign currencies constitute over 50% of the portfolio of all credits on the purchase of real property) and causes economic, social and political costs.

Notwithstanding before-mentioned notes, what dominates is a view about positive role of float during financial crisis and following softening in real sector (Welfe, Florczak 2010; Bieńkowski, Gawrońska-Nowak, Grabowski 2011). However, the Polish experience is not typical among the Central and Eastern Europe countries.

3. The exchange rate regime and current account in the countries of Central and Eastern Europe

Since the end of the nineties, the bipolar approach has been shaped in the regard of the choice of exchange rate regime in Central and Eastern Europe countries.

Some of the countries chose flexible exchange rate regimes (the Czech Republic, Poland, Romania) and some of them regimes like hard peg (Estonia, Lithuania, Bulgaria). Although the decision about the choice of the final ones was motivated mainly by the desire to obtain a fast effect of exchange and monetary policy credibility and the achievement of macroeconomic stability, these countries maintained adopted solutions also in the subsequent period. The factor that determined the policy of exchange rate was also the EMU. Slovenia and Slovakia got away from relatively floating exchange regimes to horizontal band in relation to the participation in ERM2 and then joined euro zone (respectively: in 2007 and 2009).

In the period of global financial crisis, 4 countries out of ten countries of the region owned floating exchange rate (the Czech Republic, Poland, Romania and Hungary) and other four had fixed exchange rate (Bulgaria, Estonia, Lithuania and Latvia). Slovenia was a member of euro zone and Slovakia joined this zone in 2009.

In the Central and Eastern Europe countries, it may be expected that the balances of current account will be negative in relation to the emergence of real convergence processes (Najlepszy, Sobański 2010). However, both within the period before the breakdown of global crisis and in the later period, significant diversities in the scope of external imbalance in the region countries are visible. In general, the deficit in current account was increasing in the period before crisis, however, at a different pace (Table 2).

Table 2. Current account balance*

Country	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Bulgaria	-5,5	-2,4	-5,3	-6,4	-11,6	-17,6	-25,2	-23,1	-8,9	-1,5	0,1	-1,3
Czech Republic	-5,1	-5,3	-6,0	-5,0	-1,0	-2,0	-4,3	-2,1	-2,4	-3,9	-2,7	-2,5
Estonia	-5,2	-10,6	-11,3	-11,3	-10,0	-15,3	-15,9	-9,2	3,4	2,9	2,1	-1,2
Latvia	-7,7	-6,7	-8,2	-12,9	-12,6	-22,5	-22,4	-13,1	8,6	2,9	-2,2	-1,7
Lithuania	-4,7	-5,1	-6,7	-7,6	-7,1	-10,6	-14,4	-12,9	3,7	0,1	-3,7	-0,5
Hungary	-6,1	-7,0	-8,0	-8,3	-7,2	-7,4	-7,3	-7,3	-0,2	1,1	0,8	1,6
Poland	-3,1	-2,8	-2,5	-5,3	-2,4	-3,8	-6,2	-6,6	-3,9	-5,1	-4,9	-3,5
Romania	-5,5	-3,3	-5,9	-8,3	-8,6	-10,4	-13,5	-11,5	-4,2	-4,4	-4,5	-4,0
Slovenia	0,2	1,0	-0,8	-2,6	-1,7	-2,5	-4,8	-6,2	-0,7	-0,6	0,0	2,3
Slovakia	-8,3	-7,9	-5,9	-7,8	-8,5	-7,8	-5,3	-6,2	-2,6	-3,7	-2,1	2,3

* As a share of GDP

Source: Eurostat (access: 30.01.2014).

The course of events in the countries with fixed exchange rate which did not belong to euro zone, was principally characteristic. They recorded the relatively highest GDP growth with a distinct positive output gap which was growing especially in 2005-2007. The strongly increasing deficits of current accounts accompanied the before mentioned unstable demand boom which preceded crisis.

Table 3. External balance of goods and services*

Country	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Bulgaria	-9,4	-8,1	-10,3	-11,5	-15,1	-17,6	-19,7	-20,5	-8,8	-1,9	0,0	-3,7
Czech Republic	-1,5	-1,2	-1,2	0,9	2,7	3,0	2,7	2,4	4,0	3,4	4,1	5,6
Estonia	-2,5	-7,4	-7,5	-7,1	-6,5	-10,2	-9,2	-4,0	5,5	7,0	3,7	0,2
Latvia	-9,6	-9,8	-12,6	-15,6	-14,5	-21,6	-20,1	-13,7	-1,5	-1,4	-4,8	-3,9
Lithuania	-5,5	-5,7	-5,9	-7,1	-7,1	-10,1	-13,3	-11,8	-1,8	-1,9	-2,7	0,8
Hungary	-1,0	-1,9	-3,8	-3,6	-2,1	-0,9	0,9	0,5	4,9	5,7	6,5	7,3
Poland	-3,7	-3,5	-2,7	-2,4	-0,7	-1,8	-2,9	-4,0	0,1	-1,2	-1,2	0,3
Romania	-7,6	-5,6	-7,5	-9,0	-10,2	-12,0	-13,9	-13,0	-6,0	-5,7	-5,3	-4,7
Slovenia	-0,8	1,2	-0,2	-1,3	-0,4	-0,5	-1,7	-2,5	2,2	1,5	1,5	4,8
Slovakia	-8,1	-7,3	-1,9	-2,8	-4,7	-4,0	-1,1	-2,4	-0,5	-0,2	0,5	5,2

* As a share of GDP.

Source: Eurostat (access: 30.01.2014).

The fixed exchange rate plays a great role in the mechanism called boom and bust. Both financial crises in the nineties and macroeconomic imbalances, which took place in CEE countries before the global financial crisis of 2008, were preceded by strong influx of foreign capital which boosted liquidity in economy and then by its sudden stop. The growth of credit, strong GDP growth and growing CA deficits accompanied the period of the influx. O. Arratibel et al. (2011), using panel estimations for the period between 1995 and 2008, find that lower exchange rate volatility is associated with higher growth, higher stocks of FDI, higher current account deficits, and higher excess credit. N. Magud, C. Reinhart, E. Vesperoni (2011) show that bank credit grows more rapidly and its composition tilts to foreign currency in economies with less flexible exchange rate regimes.

In the course of crisis and despite harsh falls of GDP, CEE countries, which applied fixed regimes, did not decide on its change and currency devaluation. Instead of this, some of them (especially Estonia and Latvia), conducted deep internal adjustments. Just after 2009, CA balance improved very quickly (from the level of -20% to the steady one). They also recorded positive growth which was usually the highest in the region. Moreover, the countries, which belonged to EMU, improved their situations (both Slovakia and Slovenia recorded positive CA balance in 2012).

In the countries which owned floating exchange rate before crisis, the escalation of macroeconomic imbalances (including external imbalance) was less harsh, but still visible. They were also strongly affected by financial crisis. Po-

land is an exception here. The improvement of CA after the crisis was slight and (after the first crisis phase) temporary in the countries with floating exchange rate. The only country, which experienced significant improvement of external balance, i.e. Hungary, reached this (much like Baltic countries) in the circumstances of economic stagnation and limited demand.

We cannot rely only on the analysis of CA balance as in CEE countries, negative income balance has growing meaning. What is much more distinct among all of the analyzed countries after the period of global crisis, is the improvement of goods and services balance (Table 3). However, it is independent from the applied exchange rate regime.

4. The exchange rate regime and effects of adjustments

Between 2007-2012 and in the case of hard peg countries, the changes of nominal effective exchange rate were slight (with a little tendency to strengthen before the crisis breakdown) by way of domestic currency fixing against euro and the dominating role of transactions which were settled in this currency (Table 4). The countries, which belonged to EMU, had a similar situation.

Table 4. Nominal effective exchange rate*

Country	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Bulgaria	92,55	95,58	100,10	101,30	100,00	100,82	101,38	103,15	105,81	103,49	104,84	104,09
Czech Republic	84,33	94,08	93,80	94,18	100,00	105,20	107,63	120,73	116,35	119,34	123,03	119,12
Estonia	95,44	96,08	99,20	100,12	100,00	100,20	101,26	102,73	105,17	102,00	101,55	100,02
Latvia	119,10	115,56	108,70	105,26	100,00	100,03	99,96	100,84	102,85	99,89	100,32	100,40
Lithuania	90,06	94,71	99,42	100,55	100,00	100,08	100,83	101,78	104,28	101,63	102,00	100,62
Hungary	92,72	99,09	97,92	99,38	100,00	93,94	99,04	99,85	91,50	91,26	90,35	86,27
Poland	106,10	101,57	91,33	89,25	100,00	103,50	107,00	116,76	96,08	102,04	99,13	96,41
Romania	131,84	111,69	96,31	89,96	100,00	103,58	109,99	100,79	89,16	87,97	88,33	83,15
Slovenia	106,01	103,13	102,50	101,09	100,00	100,16	100,44	100,93	102,96	101,08	101,42	100,73
Slovakia	87,01	88,25	93,40	97,67	100,00	103,64	114,42	124,12	132,51	129,54	129,77	129,23

* Nominal Effective Exchange Rate – 36 trading partners.
2005 = 100.

Source: Eurostat (access: 30.01.2014)

In the countries with floating exchange rate and within the period preceding crisis, the appreciation of domestic currency emerged (it was very strong in some countries) and during the time of crisis, domestic currency weakened (the weakening was moderate in the Czech Republic). In the first period (in 2009), the countries with fixed regimes reacted with minor nominal currency strengthening. If 2005 is to be taken as a base year, what is justified as it eliminates statistical effect of strong appreciation just before the crisis breakdown, countries

with floating exchange rates recorded the weakening of currency (except for the Czech Republic) and the remaining countries maintained nominal currency value (except for Slovakia).

Table 5. Real effective exchange rate*

Country	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Bulgaria	92,94	93,24	95,49	97,83	100,00	102,49	109,79	119,49	132,14	136,94	142,18	138,05
Czech Republic	79,03	92,06	92,97	95,79	100,00	105,10	108,65	121,19	114,34	117,98	121,64	119,30
Estonia	84,61	87,09	92,87	98,37	100,00	107,29	122,95	135,19	135,30	125,20	121,57	123,52
Latvia	98,83	92,95	90,49	92,60	100,00	114,33	141,67	163,79	148,47	131,38	133,57	131,84
Lithuania	85,59	89,98	93,25	96,79	100,00	107,95	111,50	117,36	114,87	105,65	104,77	101,60
Hungary	79,53	90,69	92,92	97,96	100,00	95,17	104,59	105,35	95,17	94,59	94,35	93,80
Poland	121,42	111,25	94,73	90,05	100,00	101,44	105,58	118,98	95,97	103,91	100,42	96,71
Romania	94,17	77,09	78,16	74,69	100,00	107,16	128,46	138,73	120,66	116,30	116,87	114,15
Slovenia	97,53	98,16	99,48	100,90	100,00	100,23	101,18	103,55	109,72	108,80	107,43	104,98
Slovakia	79,39	82,10	88,56	94,67	100,00	104,82	114,18	124,21	134,53	130,87	129,31	125,72

* Real Effective Exchange Rate: deflator – unit labor costs in the total economy, 36 trading partners. 2005 = 100.

Source: Eurostat (access: 30.01.2014).

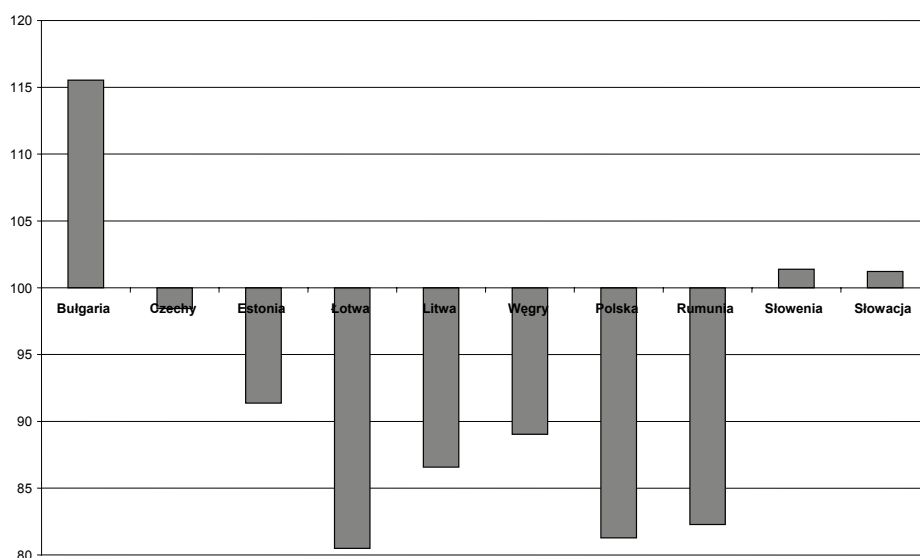
In the period preceding the crisis breakdown, real effective exchange rate had a tendency for the appreciation in all of the region's countries (Table 5). The strongest appreciation of countries' currencies took place inside the countries which applied fixed regimes of exchange rate. Nevertheless, it happened in Slovakia in the period of its participation in ERM II. Both shocks, which were connected with crisis, meant the softening of real exchange rate in most of the region's countries (except for Bulgaria, Slovenia and Slovakia).

The REER changes were significantly differential against the scale (Figure 1). The significant depreciation of REER occurred both in countries with floating mechanisms (Poland, Romania) and in the ones with fixed mechanisms (Latvia and Lithuania). **However, the softening did not compensate previous appreciation in most cases** (except for Poland and Hungary if 2005 was taken as base year).

REER depreciation in Latvia and other Baltic countries arose from deep internal devaluation. Since the beginning, the strategy employed by the Baltic countries, i.e. the sustenance of fixed exchange rate despite strong negative shock, significant demand and price adjustments, the sustenance of a path aimed at euro zone entry, was a subject of numerous controversies (Aslund 2011; Darvas 2011). When it started bringing first positive results (significant limitation of imbalance), also the nature of such processes was subject to heated debates (Blanchard 2012; Darvas 2012; Krugman 2012). The key questions were the following ones: How much is this improvement a result of deep fall of demand? How much is it connected with relatively fixed improvement of competitiveness? Nowadays, it can be clearly visible that it is something more than just

fleeting recession effect and demand and capital outflow cuts. It is related to relative stability of external balance improvement which was obtained by way of export growth and GDP growth that was faster than the one of the remaining region countries.

Figure 1. Real effective exchange rate* (2012)

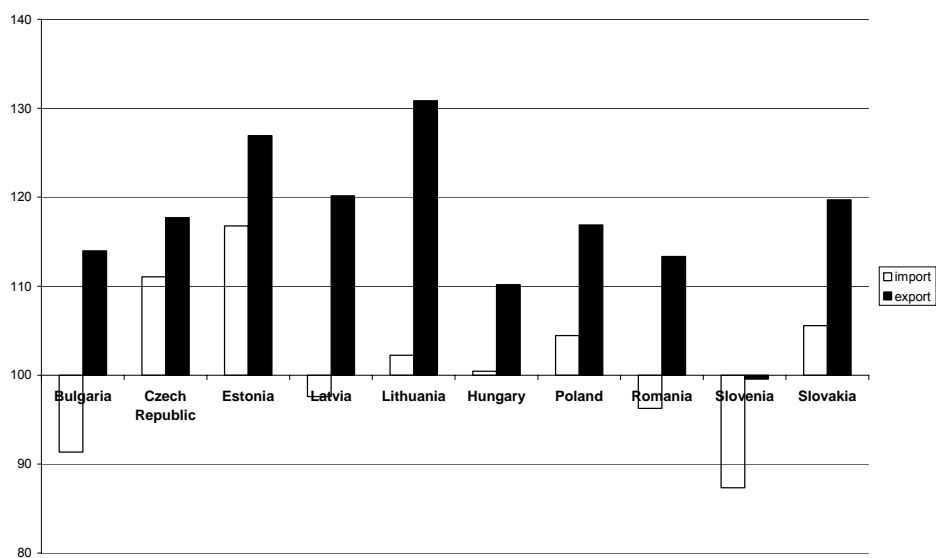


* NEER, deflator ULC, 2008 = 100.

Source: Eurostat (access: 30.01.2014).

As it was mentioned above, the improvement of goods and services' balance occurred after the period of crisis in all of CEE countries. The export growth (Figure 2) was the source of this improvement (except for Slovenia). It is clearly visible, especially in countries with fixed exchange rate mechanisms (such as in Latvia, Lithuania and Estonia). In the countries with floating exchange rates, the export growth was also visible, however, it was weaker. The countries with fixed exchange rate regimes (Bulgaria, Estonia, Lithuania and Latvia) improved their shares in the global export (Figure 3). As far as countries with floating exchange rates are concerned, it is not possible to make a clear statement about this issue. However, improvement was recorded in Poland and Romania.

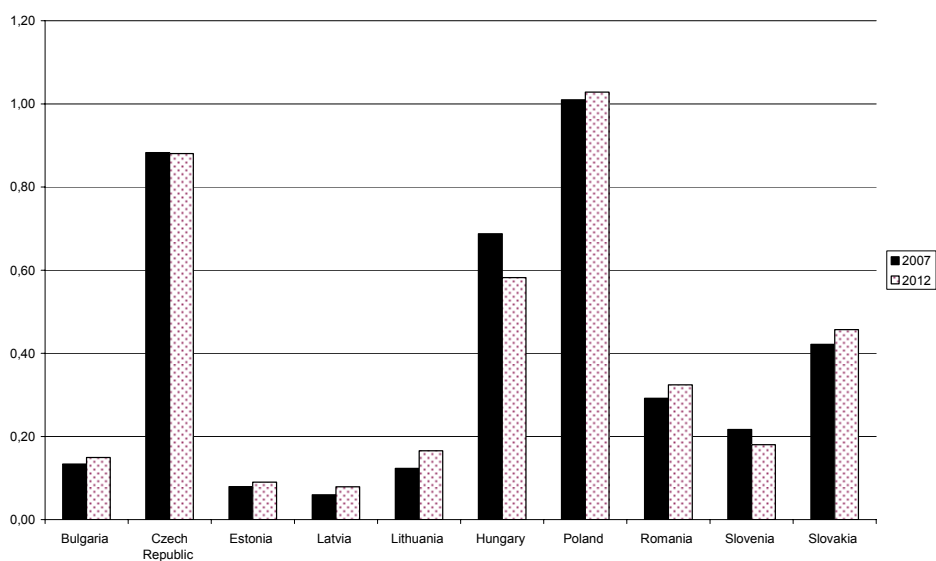
Figure 2. Export and import (2012)*



* 2008 = 100.

Source: Eurostat (access: 30.01.2014).

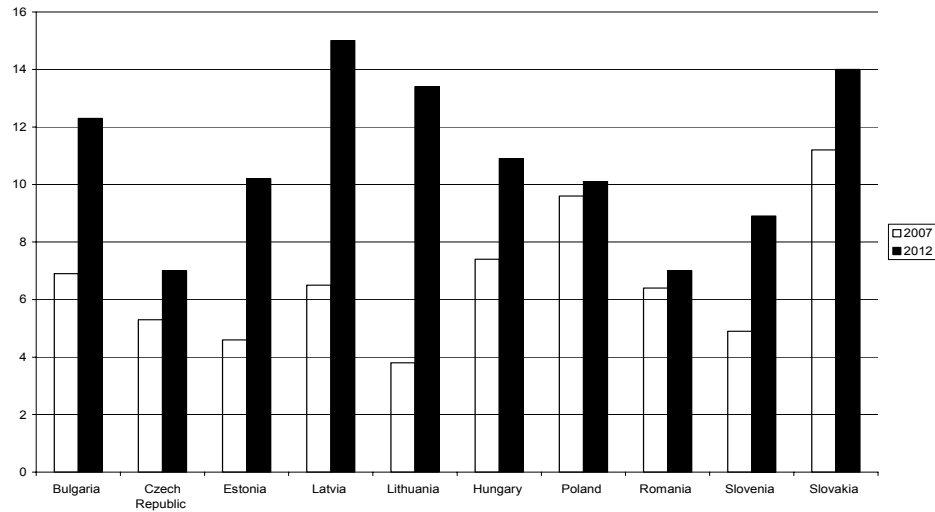
Figure 3. Share of exports of goods in world exports



Source: Ameco (access: 30.01.2014).

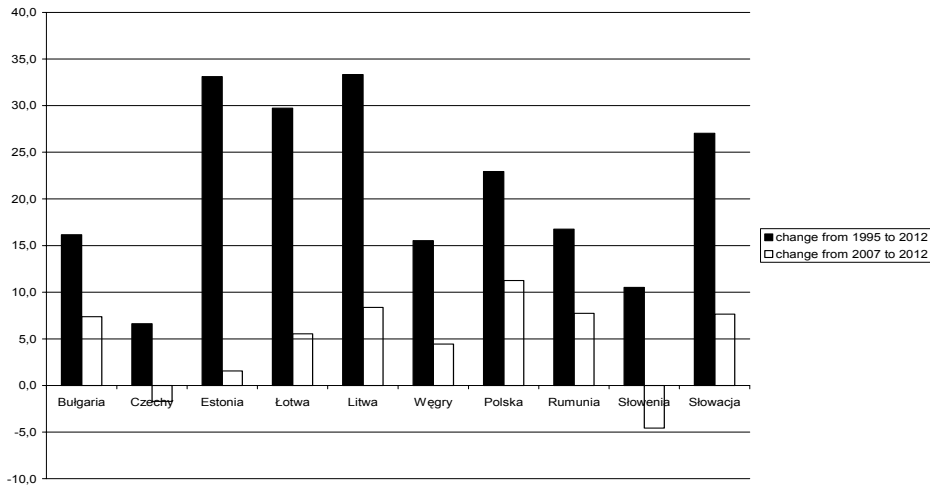
It should be emphasized that from the perspective of the Baltic countries' societies, internal devaluation brought harsh costs. While looking at unemployment, the costs of the adopted way of adjustments are explicit (Figure 4). The situation on the labor market deteriorated in all of the countries which kept fixed exchange rate during the period of global crisis. The reaction was much more explicit than in the countries with floating exchange rate. The costs scale will certainly be stronger than in the countries with other experience than of Baltic countries.

Figure 4. Unemployment



Source: Eurostat (access: 30.01.2014).

Figure 5. Change in GDP per capita



Note:

EU15 = 100.

Source: Eurostat (access: 30.01.2014).

The key challenge for CEE countries is to reach the growth pace enabling to remove development gap which is present against the rest of EU countries. The Figure 5 shows the change of GDP per capita against average GDP per capita UE15. Since the beginning of global crisis, it was Poland, which shortened its distance separating it from the average of the richest EU countries. However, the countries with fixed exchange rate regimes (Bulgaria and Latvia) are also among the leaders. The chart does not indicate the occurrence of relationship between a given exchange rate regime and the pace of real convergence in the period of global financial crisis.

Conclusions

After the crisis, the adjustments in CEE countries took place in many forms. They were only partially dependent on the existing exchange rate regime. Depreciation of nominal exchange rate took place in the countries which maintained floating exchange rate. Whereas, in the countries which fixed the exchange rate in the primary period, the exchange rate was subjected to little appreciation. However, the scale of reaction in the categories of real exchange rate was not dependent on exchange rate regime. The pace and scale of external balance adjustment in the countries with fixed regimes were more significant than in the countries with floating exchange rate. Furthermore, the adjustments took place because of export growth, not by way of import limitation.

To summarize: in contrast with unambiguous example of Polish economy, there is no evidence for the positive role of floating exchange rate in macroeconomic adjustments after the crisis in Central and Eastern Europe countries which belong to EU. The example of Hungary is considerably less unambiguous. CA and goods and services balance improved substantially. However, the export growth was slight and there were losses in global export shares. The adjustments in the countries with fixed regimes were fast and deep. The real exchange rate decreased, export, CA and goods and services balance improved and development distance against EU countries was reduced. The experience of Baltic countries, which have internal devaluation, should be very carefully conveyed to other countries as by way of the latest historical experience and relatively short period of boom, the societies may be more prone to accept the costs.

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