The impact of the financial crisis under the effects of increasing global economic interdependence. The case of Eastern and Central Europe Economies

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The technological progress that arose in areas such as transportation, communication and information exchange has led to a series of consequences that forced national economies to converge into a global, market based economy. In addition to the aforementioned causes, increased liberalisation amidst financial markets has supplemented the initiation of this metamorphosis that had several benefits in terms of general commercial exchange (trade), capital flows, and investment opportunities for business organisations. Simultaneously with the financial leverage resulted from the expansion of these interconnections, a series of channels that are detrimental to the financial welfare of entities has emerged, which, in consequence elevated the vulnerability and susceptibility to external economic shocks. The major debate elicited by this trade-off mainly concerns the costs and benefits of the international liberalisation of capital flows and trade. The purpose of this article is to examine the methods through which globalisation has affected the expansion of the international financial crisis back in 2008, by identifying and assessing the subsequent transfer routes, to and from the United States, where it was initially triggered. This article also aims to evaluate the repercussions experienced by Central and Eastern Europe and how they re-established economic growth following the financial crisis.

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INTRODUCTION

To keep the same number of jobs a Volkswagen factory in Curitiba, Brazil has reduced the working hours and wages, firing workers in small outlets in the textile industry in Cambodia because of the collapse of external demand and the refusal to grant a loan to expand the business of a Caffe Shop in the Historic Centre of Budapest plus many other similar situations occurred almost simultaneously in late 2008. However these situations described, from different regions of the world have a single origin: the financial crisis triggered in the United States. The crisis began as a turmoil in the financial market from the United States, but turned into an economical one in many countries.

The relatively small economic recovery from the crisis and the years of economic progress lost raised not only academic debates over speculative behaviour of banks and the financial market risks, but globalisation itself. Although until now, the phenomenon of globalisation has contributed to the prosperity of the global economy through trade liberalisation and capital transfers, in 2008 was revealed the risk of unprecedented financial integration in economic history. The first goal of this article is to examine the role of financial and trade globalisation in the economic crisis in 2007.

The reasons for the financial crisis and its effects was one of the most debated topics in the economic literature of the last years. And for good reason, given the major impact that it had on the global economy and society. According to Noriel Robiuni, crises of this nature must be addressed with special attention given the profoundly destructive potential: the failure of nation-states or their deep indebtedness, massive layoffs, the collapses of industry, trade wars, social crises, or even leading the roads for armed conflict (just as the Great Depression of 1929-1933 set the stage for World War II (Roubini, 2010)). Another leading economist, Paul Krugman, focused on "job drought „ and the financial and psychological distress that long-term unemployed people experienced because of the financial crisis (Krugman, 2012). He adds that there is a significant difference between involuntary unemployment in a period of prosperity, and involuntary unemployment in terms of the recession, because of the increasing time required to reactivate on the labor market an unemployed person.

The financial crisis was not a surprise for all economists. Roubini predicted the collapse of the housing market in the United States and the economic recession that followed. Also, Robert Shiller cautioned about the existence of a speculative bubble in the stock market that aimed high technology companies before their collapse in 2000-2001 and was among the first to have reported the accumulation of a speculative funds in the stock market (Shiller, 2000). Raghuram Rajan (2005) pointed out that the global financial system is vulnerable to new turbulence because of how investment bankers and operators are paid and are stimulated to take increasing risks.

Moreover, the financial crisis has been extensively studied throughout the transmission mechanisms. Michael Bordo and John Landon-Lane (2010) analysed the propagation pattern of financial crises in the global economy since the 19th century, on a wide range of countries, comparing the size of the recent crisis to others that occurred in history, also demarcating the types of crises: banking crisis, debt crisis, exchange rate crisis, and various combinations of these. Galina Hale (2011), studied the effects of financial globalisation by comparing the evolution of foreign capital. Hale's research on the 1997-1998 Asian crisis and the global crisis of 2007-2008 indicates that excessive leverage can lead to large global financial imbalances. Also, Hale argues that overall, the financial globalisation had multiple beneficial effects on the developing economies through the access to global capital markets and lower costs of capital.

The theme actuality is also underpinned by the OECD Report „*Reviews of Risk Management Policies Future Global Shocks. Improving Risk Governance*". This report includes financial crises among those highly destructive events (such as major natural disasters, world-wide disease or political revolutions), which can produce effects beyond their geographical origin point based on global interconnectivities that accompany economic integration. Because of its global nature, the recent economic and financial crisis has helped refocus the debate on the increasingly complex economic interdependence between countries.

1. THE ECONOMIC CONTEXT. WHAT TRIGGERED THE FINANCIAL CRISIS

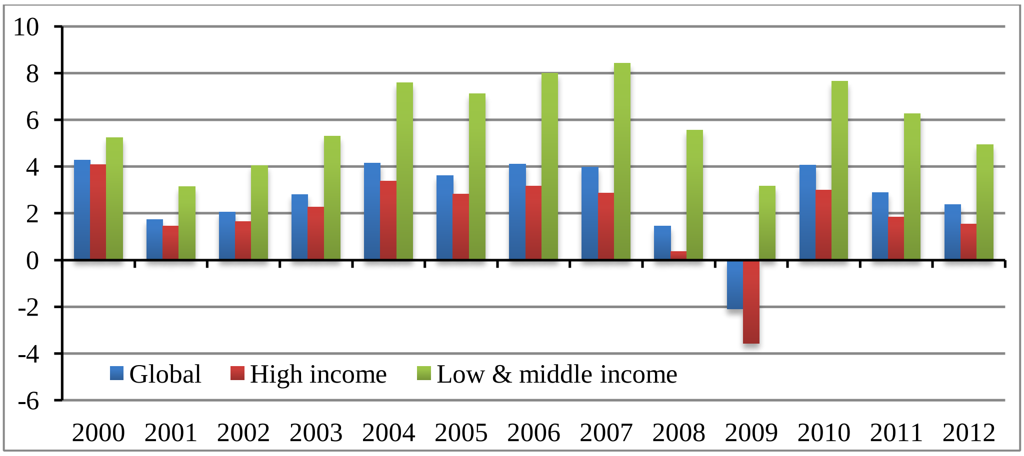
The date of August 9, 2007 remains in economical history as the day when the banking system was shaken by BNP Paribas announcement regarding business interruption of three hedge funds specialising in mortgage debt in the United States. That was when it became clear to investors around the world that there are tens of trillions of dollars invested in derivatives much riskier than previously estimated by bankers. Given that the banks exposure to losses could not be clearly estimated, the confidence in these "innovative" financial products evaporated overnight.

Financial market turbulence lasted about a year until the financial crisis installed. On September 15, 2008, the investment bank Lehman Brothers went bankrupt, denying the theory that "too big to fall" financial institutions will not be allowed to fall (as it happened initially by finding a buyer for Bear Stearns or the nationalisation of Northern Rock in Great Brian). The fear of a domino effect among the global financial system has forced governments to inject large amounts of capital in the banking system to prevent a total collapse. Although government intervention managed to rescue the banks in the last minute, it was too late to prevent a free fall for the real economy. Stopping the flow of capital to the private sector blocked the investments and the corporate operation, which later led the global economy into a deep recession.

Financial turmoil resulted in a generalised and globally decrease of economic activity and rising unemployment. The crisis left a mark simultaneously in countries from all continents, and unprecedented negative effects appeared that were unseen from the Great Depression of 1929-1933.

Figure 1

Economic growth rate in the world (%)



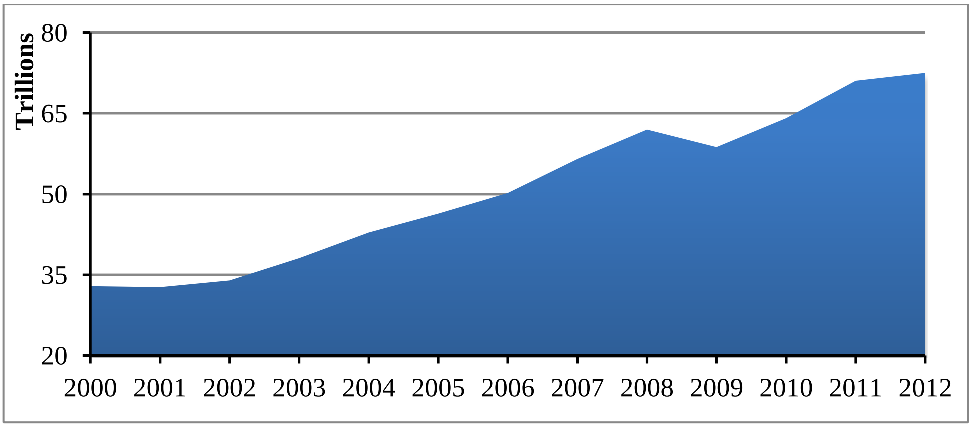
Source: World Bank, World Development Indicators 2014;

Global economic growth rate was reduced by approximately 6 percentage points from the peak year 2007 to 2009 (-2.1% economic decline globally while the average rate was 3.13%), which was translated into the largest free fall from post-war era. According to the World Bank data, the most developed countries showed the greatest reductions in economic growth. Thus, in these economies, the growth rate decreased from 4.1% in 2006 and 3.98% in 2007 to 0.36% in 2008 and -3.56% in 2009.

According to the World Bank the global production fell by 5.26% between 2008 and 2009. In nominal terms, this equals a reduction of 3.25 trillion dollars to the world economy. The most affected countries by the economic and financial turmoil were the countries classified as "High Income". Their aggregate production fell by 3.22 trillion $. For example, the Japanese economy experienced the deepest recession since the end of World War II as a result of lower demand (Japanese exports fell by approximately 24.2% between 2008 and 2009 according to the World Bank data). Also the european economy shrank by more than 2,12 billion $ between 2007 and 2009, a slow recovery in 2010, and a new drop in production between 2011 and 2012 amid the sovereign debt crisis in the Eurozone. Financial shock was transmitted in the EU member countries through the drying of inter-bank liquidity, exposure to toxic assets (especially banks in Germany, France, Belgium, Italy and Iceland) but also by reversing the flow of capital causing negative economic effects in the member countries. The particularly intensity of the crisis affected varied the European countries: from major collapse in economies like Iceland and Lithuania or large macroeconomic imbalances in the southern and eastern flank to relatively stable developments in countries such as Poland, Czech Republic, Germany and northern countries (Goschin, 2010). The effects of the financial crisis and the mechanisms by which they propagated in Central and Eastern Europe (CEE) will be studied in detail within this paper.

Figure 2

The global GDP (current $)

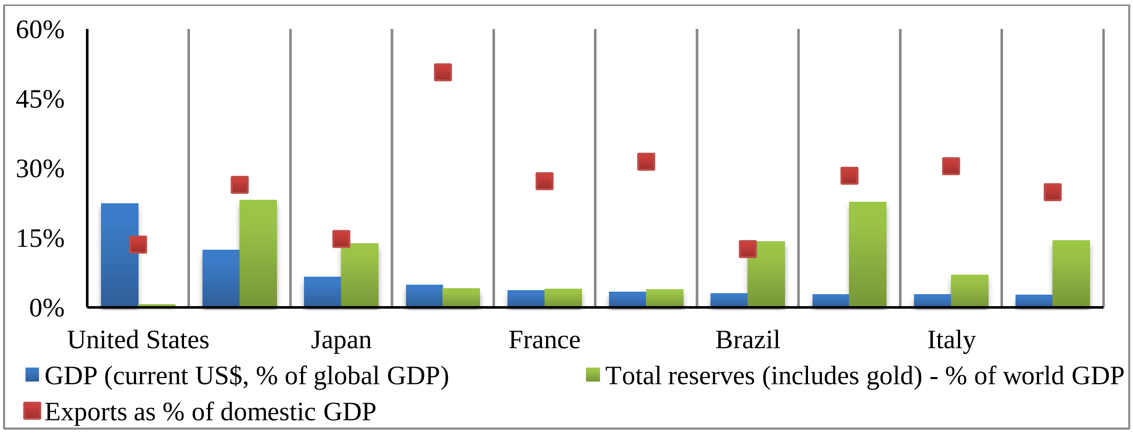


Source: World Bank, World Development Indicators 2014;

Even before the onset of the crisis in 2007-2008, the number of financial turmoil has intensified in terms of numbers, frequency or severity. There are a number of examples that demonstrate that the development of local financial systems, in parallel with the growing liberalisation of capital inflows in emerging markets has been far from a smooth process. Eloquent examples are the Mexican crisis (1994), Crisis in East Asia (1997-1998), Russia (1998), Brazil (1999) and Argentina (2001). In all these cases, economies were severely affected. Effects have resulted in major economic recession, the collapse of national currencies or sovereign default. But until the recent crisis in 2007, the contagion effect was more regional or national.

There are two possible explanations for the global-wide effect. The first refers to the fact that the countries listed above present no "systemic importance" for the global economy. Instead, macroeconomic slippages from the United States economy has caused wide fluctuations because of its size. (Socol, Hrebenciuc, 2008).

Figure 3.
Systemic Important Countries measured by their importance in different global issues



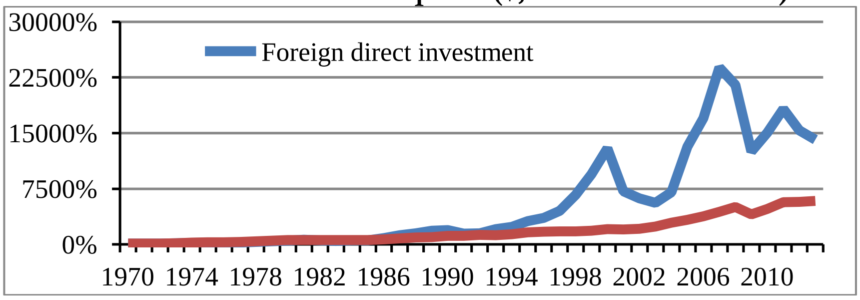
Source: World Bank, World Development Indicators 2014;

A second explanation for the contagion effect refers to deeper financial globalisation between national economic systems. The unprecedented interconnectedness of financial markets has created dispersion channels for toxic assets in the banking institutions worldwide. But the globalisation itself caused no negative effects on the world economy. On the contrary, it facilitated an abundance of capital in emerging markets, multiplying the sources for financing the real economy, which enabled investment. On the other hand, the benefits of globalisation were also seen for developed countries with inflationist potential. The progressive liberalisation of trade generated the possibility of importing cheaper products from developing countries due to lower labor costs and other competitive advantages.

The development of international trade and the increase of capital flows reflects the long-term trend of globalisation, stimulated by the gradual liberalisation of emerging markets. Graph 4 reflects the unprecedented expansion of trade between countries, as a result of the gradual liberalisation of emerging economies. The international trade declined during the global recession of 2007, more than in any other period of crisis. This happened largely as a reflection of the increased interconnectedness of world economies. In absolute terms, international trade has declined globally with 20.16% in the case of import of goods and net products (World Bank Data) in 2008.

Figure 4

Evolution of FDI and imports ($, index 1970 = 100%)



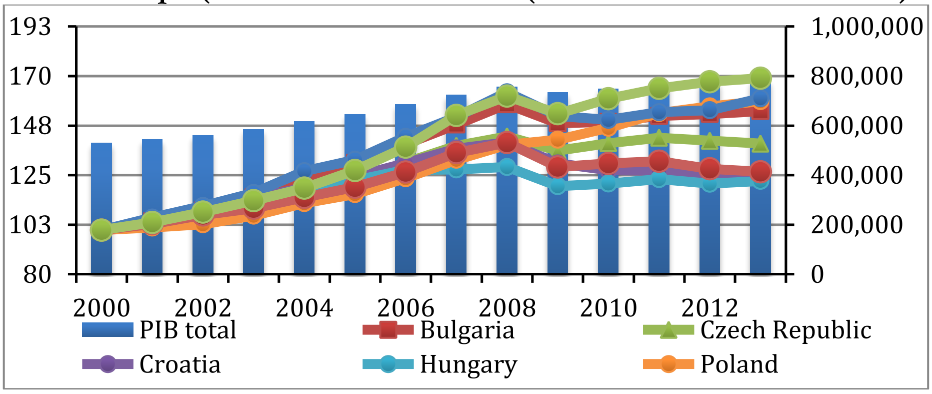
Source: Own calculations based on World Bank Indicators 2014

2. Case Study: Impact of economic crisis in Central and Eastern Europe

The financial crisis has not only affected the economies with strong financial ties to the USA, it also impacted economies with lower financial integration. In this section we intend to analyse the impact and the transmission channels through which the Eastern and Central European economies responded to external shocks. In this case we analysed the countries that joined the EU in 2004 (Hungary, Czech Republic, Poland, Slovenia, Slovak Republic), 2007 (Romania, Bulgaria) and 2013 (the last country that joined the EU, Croatia).

The average economic growth rate of the eight member states in Eastern Europe in the period 2000-2013 was 2.9% (1.5 percentage points higher than the average EU and by 1.8 percentage points Eurozone average). But at the same time Eastern European economies have had some of the most volatile developments in the European Union (the largest falls were recorded in the Baltic States) which indicates a lack of sustainability of Eastern European economies and the public policies adopted in their states.

Figure 5
The evolution of the total GDP (million euro – right scale) in Central and East Europe (and the nationals GDP (left scale - index 2000 = 100)



Source: Eurostat;

Therefore, in between 2000-2008 the average economical rate was at 4.7%, the east-european countries had in 2009 an average recession of 5.2% (Bulgaria: +5,8 in 2000-2008, a fall of -5,5% in 2009, Czech Republic: +4,5 between 2000-2008, dropping to -4,5% in 2009; Croatia: +4,3 between 2000-2008, fall of -6,9% in 2009; Hungary: +3,3% between 2000-2008, fall of -6,8%; Slovenia: +5,6$% between 2000-2008, fall of -4,9%)

A significant difference was noted in Poland's case, the only economy that has not been affected in any of the years analysed by the recession. The opposite is Slovenia's economy. One possible answer to one of the biggest failures of the EU (-7.9% in 2009) may be the fact that Slovenia joined the Eurozone, giving up control of their national monetary policy that would limit losses for the Slovenian economy.

Table 1

Growth rate in Central and East Europe in between 2000 and 2013(%)

	Bulgaria	*Croatia*	*Poland*	*Czech Republic*	*Romania*	*Slovakia*	*Slovenia*	*Hungary*
Mean	3,61	1,86	3,67	2,74	3,66	3,99	2,07	1,81
Standard Deviation	3,54	3,72	1,85	3,18	4,03	3,67	3,84	3,17
Range	12,2	12,3	5,6	11,5	15,1	15,4	14,9	11,6
Minimum	-5,5	-6,9	1,2	-4,5	-6,6	-4,9	-7,9	-6,8
Maximum	6,7	5,4	6,8	7	8,5	10,5	7	4,8
Sum	50,5	26	51,4	38,4	51,3	55,9	29	25,3

Source: Own calculations based on Eurostat data;

It can be observed the high volatility in CEE countries in terms of growth rate over the interval of years 2000-2013. The economic and financial crisis has exposed major fallbacks accumulated by 2007, which were superimposed on a series of country-specific unfinished reforms. These structural imbalances were masked by the rapid rate of growth pre-crisis, but exploded when the external environment worsen. Facing these negative effects, the countries with the highest liquidity or solvency problems needed large stand-by agreements with international institutions (eg Romania - 20 billion euro, Hungary - 25.1 billion euros). But for receiving these bailouts, countries had to implement austerity programs which as a paradox (Gust, 2010), had the same effect as the economic and financial crisis: job losses, blocking public or private investment and consumption collapse.

Table 2

Crisis effects in the CEE economies (average of the annual growth%)

	2005	2006	2007	2008	2009	2010
Household final consumption expenditure	4,53	5,47	6,19	3,98	-3,61	-0,09
General government final consumption expenditure	2,71	2,23	0,68	3,53	2,26	-1,06
Final consumption expenditure	5,60	18,44	10,09	4,37	-11,83	12,70
Exports of goods and services	6,13	18,98	13,58	4,85	-17,48	9,71
Imports of goods and services	4,26	5,29	4,93	3,96	-2,56	-0,29
Gross capital formation	7,81	14,29	15,86	5,90	-25,60	2,15
Industry, value added	5,55	10,05	8,49	4,87	-9,20	1,64
Unemployment, total (% of total labor force)	10,68	9,38	7,63	6,64	8,21	9,88

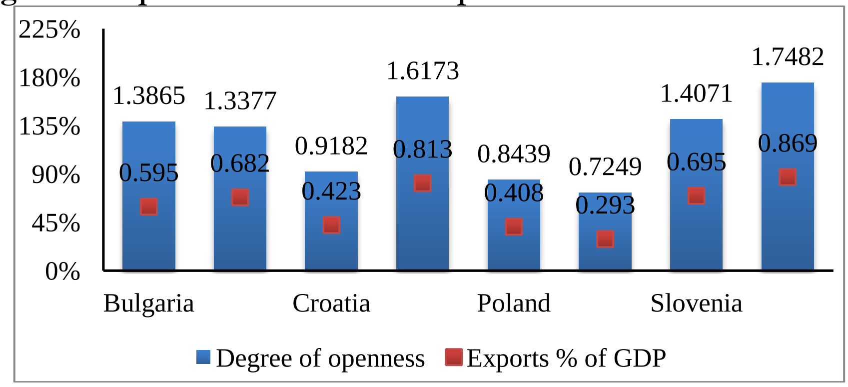
Source: Own calculations based on Eurostat and IMF data;

The research identified a number of mechanisms of the economic crisis that sent variate negative effects on East European savings. Different exposure to external demand, access to credit, remittance flows and foreign direct investment were the main causes of the differential impact of the economic crisis in the region.

In the Eastern European countries, exports have plunged 17.48% in just one year (2009 compared to 2008), reflecting the sharp drop in external demand from EU Member States. Most affected were the countries with a high share of exports in GDP as Hungary or Slovakia. Jovicic (2009) studied the relationship between the degree of trade integration with the EU market in the Western Balkans countries and of the chronology and intensity of the economic crisis. Jovicic found that while economies with a high degree of trade integration experienced earlier crisis, those with a lower degree of integration experienced a more pronounced decline in domestic production.

Figure 6

Degrees of Openness and share of exports in GDP in CEE economies



Source: Own calculations based on Eurostat and IMF data;

Moreover, Devereux (2010) noticed a pattern on the branching of the crisis and trade connections between countries. According to him, the main channel of transmission of the global economic crisis in emerging economies was a generalised decrease in imports from advanced countries. It had a contagion effect throughout the supply chain worldwide, which led to a relatively high synchronisation of business cycles. This statement is supported by the empirical test developed in the business cycles of the Eastern Europe countries in relation to the business cycle of the Eurozone. The results show that business cycles are synchronised in the CEE countries in relation to the Eurozone between 66% (such as Romania and Poland) and up to 91% (Czech Republic). Having higher synchronisation of business cycles in the CEE countries to the countries of the original crisis, the risk of transmission the negative effects are greater.

Table 3

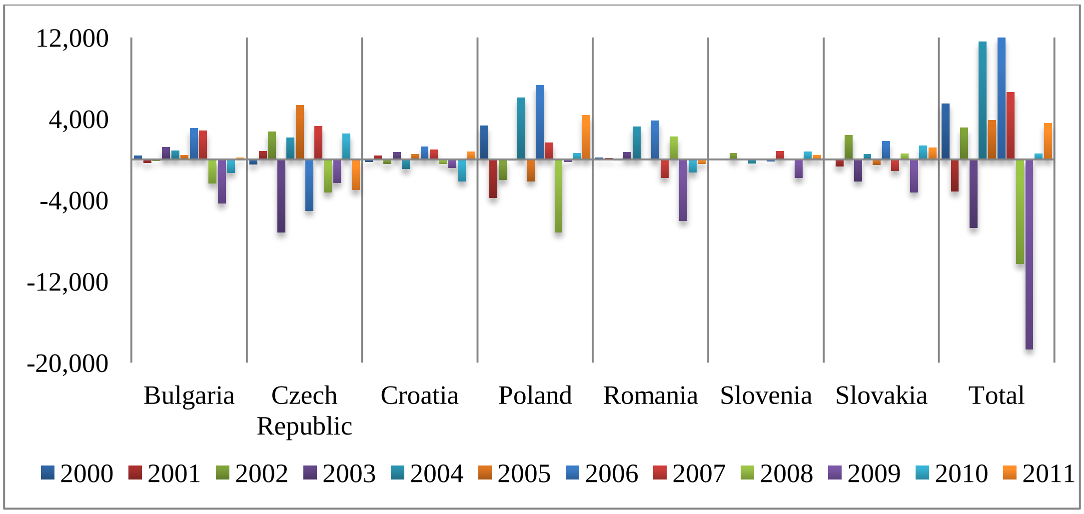
Synchronisation of business cycles between the countries of Eastern and Central Europe and the Eurozone contries in 2000-2013

	The correspondence index of business cycle	**Number of quarters in which coincided cyclical economic**
Bulgaria	0,732	40
Czech Republic	0,910	50
Croatia	0,696	39
Polond	0,660	37
Romania	0,660	38
Slovenia	0,785	45
Slovakia	0,785	44
Hungary	0,831	43

Source: Own calculations based on Eurostat data;

Another external channel of transmitting shocks was represented by the flow of foreign direct investment. Because of the accession to the European Union of the CEE countries, having full liberalisation of capital accounts, meant an acceleration of capital inflows in the pre-crisis period (2004-2007). The capital accounts were vital to the former socialist economies, contributing to the structural adjustment of the economy, increasing productivity by importing technology and know-how, balance of payments and sustaining the catching-up to the Western countries. Countries which received the most FDI were Romania, Bulgaria and Croatia. There are a number of anomalies. For example in Romania, with a few exceptions in areas such as automotive, metallurgy, telecommunications and oil exploration the foreign direct investment led to some significant exports that helped improve budget deficits and balance of payments, however most FDIs have increased consumption based on imports (eg the construction of malls and hypermarkets) rather than production, Romania becoming a point of sale of goods and marketing activities (Marinas, 2013). Level-Eastern European economies, FDI flows have been strongly linked to the privatisation of key sectors such as telecommunications, manufacturing and exploiting the natural resources. Moreover, foreign investment in the banking sector provided a widely strong incentive for regional integration of financial and capital markets worldwide. This has helped reduce interests and increase liquidity, but the financial integration encouraged in some cases the speculative booms in certain markets, or over-borrowing, especially in foreign currency (this is reflected in the high share of non-performing loans that erupted post-crisis), which increased the vulnerability of the region (EBRD Report, 2009).

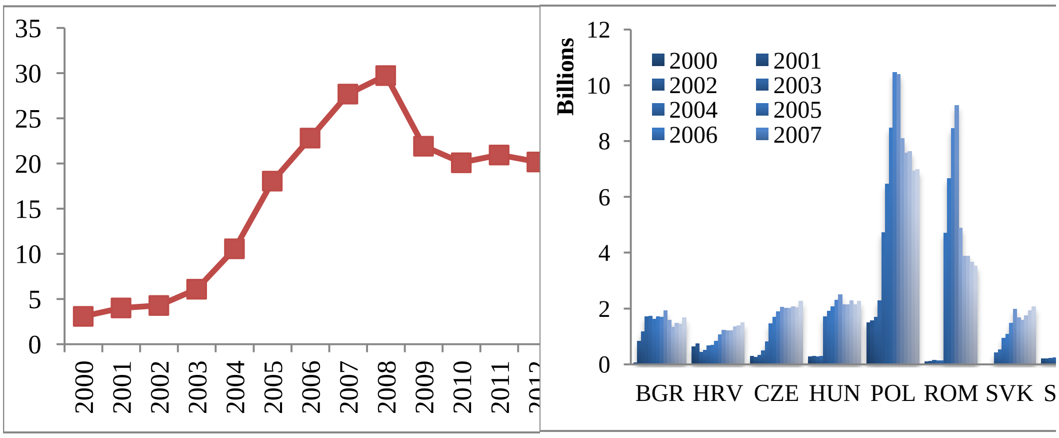
Figure 7
Direct Investment Flows in Eastern and Central Europe (million EURO - variation from last year)



Source: Own calculations based on Eurostat data;

In all analysed economies the drastic reduction of the foreign direct investment, sustained by decreasing exports had a significant effect on external balances of Central and Eastern Europe, especially among the accumulation of current account deficits experienced in years pre-crisis. If before the economic crisis began, the current account balance in the region were balanced by the private capital flows sent by workers on Western markets, starting with the year 2008 the account balance depreciated, when net remittances fell sharply. One of the reasons was that the immigrants in foreign labor markets had less advantages.

Figure 8
Migrant remittance Inflows (US$ million) in Eastern and Central Europe

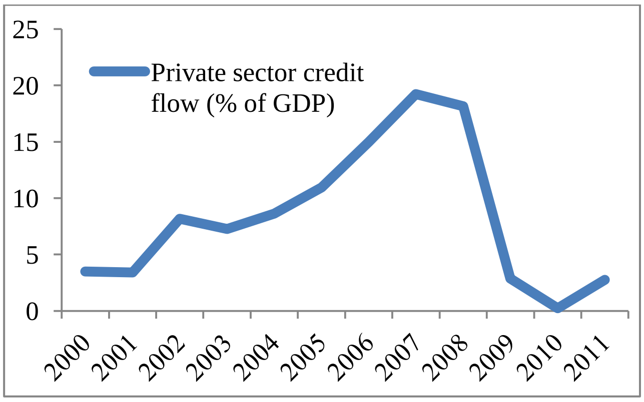


Sursa: World Bank, World Bank Indicators 2014

The decline of private remittances had a profound effect especially in economies where they have a greater share in national GDP: Romania (3.3% share in GDP, was down with about $ 5.4 billion between 2010 and 2008 according to the World Bank data), Poland (1.7% - $ 2.8 billion).

Another important channel of transmission and a distinctive feature of the economical crisis was the sudden collapse of the global credit because of uncertainty about exposure to toxic assets (Roubini, 2010). Some cases in CEE included withdrawals of capital from local branches to the parent banks in the West. The economies affected the most were those with a high penetration of foreign banks in the national banking systems. Over the last decade, foreign banks have been opening branches in underdeveloped financial systems in CEE countries due to higher relative interest rates and growing demand for credit from the private sector (Milesi-Ferretti and Tille, 2011). In some cases, such as Romania or Bulgaria, the annual growth rate of loans exceeded 30%. But the limitation of credit has obstructed the business sector. This, corroborated with the deterioration of economic conditions led to a dramatic increase in non-performing loans in the region between 2008 and 2009.

Figure 9
Evolution of private credit flows in ECE (% of GDP) in Eastern and Central Europe



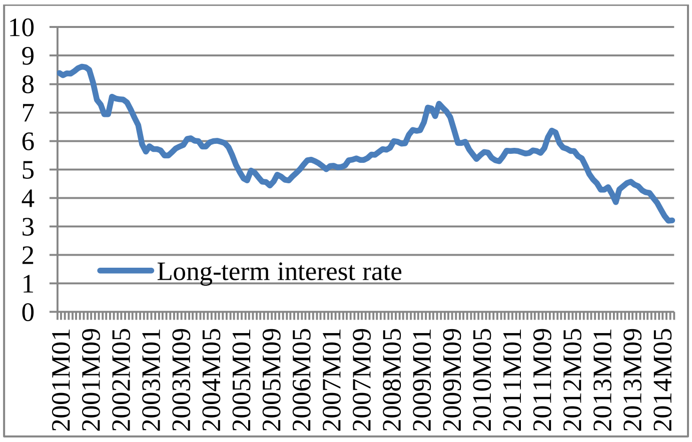
	2009 compared to 2007
Bulgaria	-29,7
Czech Republic	-8
Croatia	-12,1
Hungary	-28,9
Poland	-7,6
Romania	-15
Slovenia	-12,9
Slovakia	-8,1

Sursa: Eurostat;

Interest rate decreased immediately after joining the EU, because of the complete liberalisation of capital account and capital abundance. But with the onset of financial turmoil, CEE countries have had to pay higher interest costs to boost exiting the crisis. They showed a peak in 2009, with the outbreak of the sovereign debt crisis when a large part of the Eurozone was affected, triggering in the EU doubts among the investors.

Figure 10

Evolution of average interest in Eastern and Central Europe (%)



	2009 compared to 2007
Bulgaria	2,68
Czech Republic	0,54
Croatia	2,90
Hungary	2,38
Poland	0,64
Romania	2,56
Slovenia	-0,15
Slovakia	0,21

Source: Eurostat;

CONCLUSION

It was shown by the recent financial crisis how integrated the worlds economy is and how an economic event may cause effects all over the world as a result of economic and financial interconnectivity. What started in 2007 as a short circuit of the sub-prime financial market in the USA, has escalated into an economic crisis which had disastrous effects even in countries with a limited level of sophistication of the financial sector. This was the most intense economic crisis since the Great Depression of 1929, and the first to affect so many countries simultaneously. Through international network of trade as well as other channels the contagion was spread worldwide.

States in Central and Eastern Europe were not avoided by the turmoil of the crisis. Various effects nation wide appeared and were depended on a number of country-specific variables: the degree of integration in foreign markets, business cycle synchronisation compared to countries where the crisis has passed, the share of exports in GDP, penetration of foreign banks in the local financial system, etc. Overall East European economies had significant decreases in private domestic consumption, government investment declined and unemployment rate increased. All these effects have led to a deep recession in the region.

There were identified a number of transmission channels of the crisis as it follows: Firstly, the foreign trade channel (reducing external demand resulted in significant decrease in exports). Secondly, the crisis of confidence resulted in reduced flows of foreign investment in Eastern European economies. Thirdly, the economic activity was reduced in the Western Europe markets which had a negative effect on migrant workers, thus reducing remittance flows. Last but not least, the economic crisis was transmitted through the financial channel when states were forced to borrow at much higher interest costs and the private sector had to deal with a general lack of liquidity.

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