

# The Effect of the World Economic Crisis on the Countries of the Balkan Region

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## Summary:

In the end of 2007 and the beginning of 2008 the US economy experienced the first signs of economic slowdown. Warning signs of increased unemployment and decreasing output were detected in the US economy. Contrary to the government's efforts for an economic revival, the economic slowdown continued to deepen and by the end of 2008 the US economy faced the largest financial shock since the Great Depression of 1929. The crisis that originated in the United States was gradually transferred across the Atlantic and by the beginning of 2009 strongly affected all the European countries, being felt particularly severely in the Eastern European countries, which were experiencing an economic renaissance by that time.

The objective of this paper is to provide a comparative analysis of the impact of the World Economic Crisis on the business environment in the Eastern European countries with a main accent on the countries in the Balkan region. For the purpose of our analysis we are looking at the data on GDP per capita, unemployment rate, and inflation rate just before and right after the beginning of World Economic Crisis in 2009. Next we conduct an empirical study of the effect of the World Economic Crisis on the business

environment in the countries of the Balkan region. We do our analysis separately country by country as well as we estimate the impact of the World crisis on the Balkan region as a whole. Even though there are many theoretical studies of the effects of the World Economic Crisis on business environment, there are not many empirical tests of these theories. We empirically test the theoretical findings, answering the question of whether there is a significant negative impact of the World Economic Crisis on the business environment in the Balkan region countries. For our empirical analysis we will use data from one of the most detailed macroeconomic data web site [www.indexmundi.com](http://www.indexmundi.com). Our paper will be organized in the following way. Section 1 – An Introduction, Section 2 – Review of the economic channels of distribution of economic crisis, Section 3 – Data and empirical research and Section 4 - Conclusion.

**Key words:** financial crisis, empirical estimation, business environment

**Jel Classification:** E24, J64, O47

## 1. Introduction

**B**usiness cycles or economic fluctuations are the changes of a country's real GDP throughout the years (Mankiew, 2011). If we look at the

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economic fluctuations throughout the years of a particular country, we will observe periods of the country's real GDP increases from one year to another and periods when the real GDP falls from year to year. The period when a country's real GDP increases from one year to another is described as expansion and the period when a country's real GDP decreases from one year to another as recession. The period of expansion represents an increase in aggregate output, increase in employment and decrease in unemployment, increase in income, and an increase in incentives for businesses and individuals to take loans. Periods of recession on the other hand are characterized by exactly the opposite features, namely by a decrease in aggregate output, decrease in employment and increase in unemployment, decrease in income, and decrease in incentives for businesses and individuals to take credits. According to Mankiew (2011) three features define economic fluctuations:

1. Economic fluctuations are irregular and unpredictable;
2. Macroeconomic variables fluctuate together;
3. When price increases, output decreases.

A major problem that a modern economist faces is the unpredictability of economic fluctuations. For example, who could predict that in 2008 the United States would face the biggest economic crisis after the Great depression of 1930? This economic crisis started in the US and quickly spread throughout the world and became one of the biggest world economic crises. According to macroeconomists, an economic crisis is a situation when the economy of a country experiences a sudden downturn brought on by a financial crisis. An economy facing an economic crisis will most likely experience

a falling GDP, a drying-up of liquidity and rising/falling prices due to inflation/deflation. An economic crisis can take the form of a recession or a depression.

This was exactly what macroeconomists observed in the US in the fall of 2008, a crisis in financial markets which rapidly grew into an economic crisis affecting firstly the US and then spreading all over the world in less than a year. Many economic studies have been devoted to the World Economic Crisis since 2008, looking at it from various angles. Part of the economic literature that emerged after 2008 tried to find a connection between the economic crisis in the US and the economic crisis that affected the rest of the world.

Claessens et al (2010), Blanchard et al (2010) as well as Cetoreli and Goldberg (2009) established that countries more tightly related to financial markets tended to suffer more from financial crises than countries that were not so tightly related. Rose and Spiegel (2010, 2011) on the other hand found no evidence that financial relationship as well as trade with the US could have been the main reason for the spreading of the financial and economic crisis outside the States. Claessens, Tong and Wei (2011) proposed the hypothesis that financial and economic crises are likely to spread via a combination of real and financial channels affecting consumer and producer expectations. In response to a change in expectations, consumers and producers change their consumption and investment behavior. Although the existing literature made a further attempt to distinguish those channels by including proxies, it turned out that there was a significant correlation between those proxies and therefore those proxies failed

to clearly separate the different channels (Rose and Spigel 2010, Milesi-Ferreti and Lane 2010). Forbes (2004) conducted a first firm-level study trying to answer the question of how a crisis which started in one country spread to many countries. The major drawback in Forbes' research was the scarcity of micro-level firm data. This problem was partly solved by Tong and Wei (2011), who used a substitute for the firm level data. Tong and Wei actually related the micro-level data of a firm's production to the stock market data. The authors established that the decline in stock prices was sharper for firms that generally depended on an external financing of the working capital in the period July 2007 - end of 2008. Due to the lack of appropriate data, the authors were not able to estimate the impact of the financial crisis on the actual investments and firm performance. In their research Claessens, Tong and Wei (2011) used actual firm-level balance sheets and income variables and managed to investigate a large number of countries affected by the crisis. In his study Tridico (2012) tried to answer the question what an economic crisis is and what the reasons for it are. Tridico claimed that the roots of the economic crisis lie in the financial crisis. The financial crisis on the other hand is endogenous and stems from the failure of regulated institutions to perform their financial duties correctly (Posner, 2009). Tridico regarded the financial crisis which started in the United States in October 2008 as a purely financial one, completely endogenous and caused by the failure of financial markets. As the author pointed out there were no external factors such as wars, oil shocks, natural disasters or global pandemic that could have caused this financial crisis.

Therefore the remedy for this crisis should be sought in a completely new governance, new financial rules and laws (Tridico 2012). Another look at World Economic Crisis was provided by Greenspan (2005) and Bernanke (2005) who claimed that the causes for the American deficit and for its cure respectively were external to the US. Skidelsky (2009) and Lowenstein (2010) contributed their vision about the origin of the crisis. According to them, the main reason for the crisis in the United States was Greenspan's loose monetary policy and the Bush administration's budget deficit. During his chairmanship of the Federal Reserve (FED) between 1987 and 2006, Greenspan kept money too cheap, which supposedly created the asset bubble particularly in the housing sector. That stimulated more and more households to take credits and buy houses. Low interest rates and private mortgages were easily accessible to people of every income group. Giving easy mortgages without the necessary guarantee for their return made it impossible for many households to pay their mortgages, which was the beginning of the crisis. Obstfeld and Rogoff (2009) and Buni and Smaghi (2008) pointed out yet another reason for the crisis in the US. They concluded that the main reason for the crisis was much more complicated than the Greenspan's "cheap money policy." Very low interest rates on savings as opposed to investments lead to the lack of internal investments in the US economy. That created not only a domestic, but also a worldwide monetary imbalance. This monetary imbalance caused a huge budget deficit in the US on one hand and an external surplus ran mainly by China and other Asian countries on the other. The external surplus produced an excess of

world savings over investments. This excess savings had a reverse effect on the US economy and created an imbalance of the aggregate supply and aggregate demand. To compensate for an increased aggregate supply US policy makers initiated a credit boom defined as an ease for consumers to take credits, which kept aggregate demand artificially high for a very long period of time. However, an increase of aggregate supply caused by external surplus did not have any effect on induced investments, nor did aggregate demand increase; it was mostly an increased demand for goods and services and not for new investments. Obstfeld and Rogoff (2009) found out that low supply and demand for new investments along with dot.com crash created what was called a “savings glut”. The savings glut created huge savings and lowered the tendency for investments in the US Economy. To encourage producers to invest in the economy on one hand and consumers to buy investment goods on the other, the US policy makers followed a loose monetary policy which created cheap money and low long-term interest rates. This led to an increase in house and commodity prices. At the same time the US consumers and home buyers were encouraged to consume by means of financial instruments and a credit boom in both the housing sector and the commodity market. It allowed the US economy to enjoy economic growth for more than a decade, which was achieved by a simultaneous boosting of aggregate supply and demand.

Structural problems in the economic system were considered as further reason for the US economic crisis (Barbara and Pivetti 2009, Fitoussi and Saraceno 2010, Brancaccio and Fontana 2011). According

to the authors, these structural problems caused a lingering recession and global disorder. Those structural problems were the main reason for distribution bias and inequality that caused a lack of consumption and effective demand in the economy.

## **2. Review of the economic channels of distribution of the economic crisis**

Many articles have been written about the World Economic Crisis investigating different aspects of the phenomenon. However, for the purpose of our analysis we are more interested in the mechanisms transferring the economic crisis from the US, where it first originated, to Europe and the Balkan region in particular. A review of two articles relevant to our research follows below:

In his article “Financial crisis and global imbalances: its labor market origins and the aftermath” Tridico (2012) added another argument to the already listed above. According to him, the main reason for the economic crisis stems from the fact that the recent aggregate demand has not been sustained by appropriate wages and productive investments and most likely has been artificially supported by the channels of financialization and credit to sustain consumption. In order to support his argument, Tridico (2012) conducted a thorough analysis of the financial instruments that according to him artificially boosted the aggregate demand and consequently led to an economic crisis in the US, a crisis which gradually became the World Economic Crisis. At the beginning of his analysis he outlined the background of the crisis. Tridico (2012) pointed out that the background of the economic crisis was an increase of the household debt in advanced

economies and the bubble of the housing sector created by low interest rates. We would add to that the big monetary savings in Asia, which did not consequently lead to an increase in investments in the US, the UK and other strong world economies. The author revealed disturbing statistics. In his view, housing prices in the US had risen more than 200% since 1997. The rest of the world had shown even worse statistical indicators. For example in Ireland the increase of the housing prices over the same period was 300%, and the UK and Spain showed an increase of 225%. In Australia, Norway, Sweden, Canada and the Netherlands household prices had grown by 200%. On the other hand, a fall in the interest rate on the monetary market was not followed by an increase of investments, which created “cheap money” favoring a financial bubble. Instead of an increase in investments, the financial market responded to the decrease in interest rates by a set of revolutionary

financial instruments such as financial derivatives, securitization, mortgage-back securities, etc. The result was an explosion of the availability of financing, particularly mortgage financing (Lowenstein 2010). The decrease of interest rates on housing loans created a large demand for housing loans among new house buyers. Since the increase in housing was not sustained by an actual increase in investments, it was supported by artificially created financial instruments that caused lack of fresh money and a consequent financial crisis.

Tridico (2012) displayed the increase in commodity prices, housing prices and the US mortgage debt in the following diagrams:

Tridico (2021) continued his analysis disclosing further causes for the economic crisis. Next he estimated the labor market as one of the potential reasons for the economic crisis. The main argument of the author is related to labor flexibility and wage determination. According to Tridico, forces on

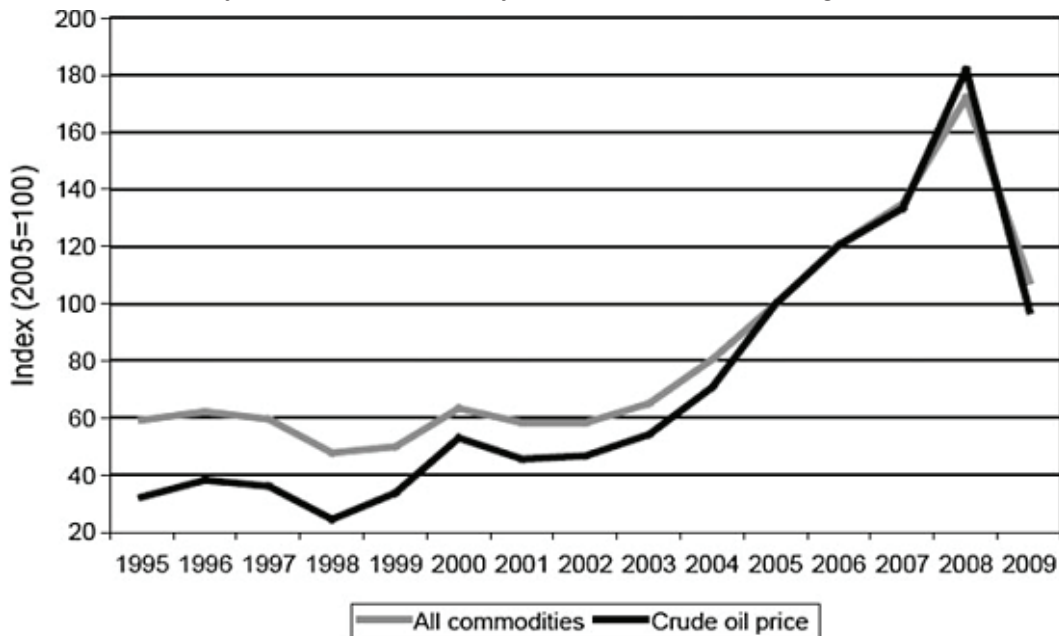


Fig. 1. Global Commodity Prices (Source: World Bank)

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the labor market are not only affected by the world crisis, but could also be viewed as one of the reasons for the economic crisis. In that respect Tridico postulated that institutional

and structural changes which had occurred on the labor market worldwide within the past 30 years were a function of a financilization process and reached its culmination during

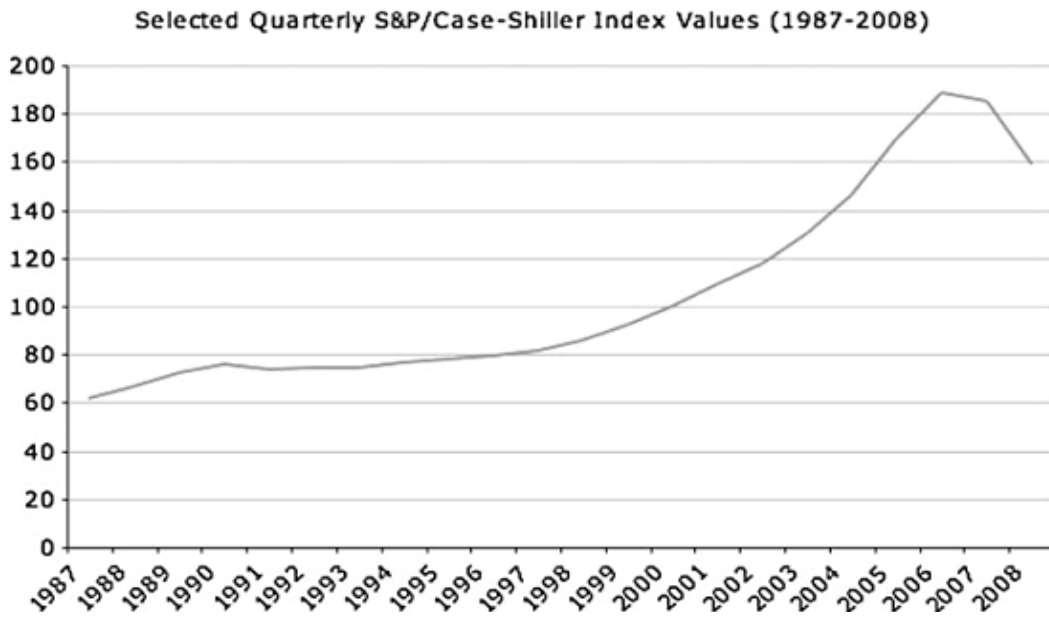


Fig. 2. Home Price Indices (Source: Standard & Poor)

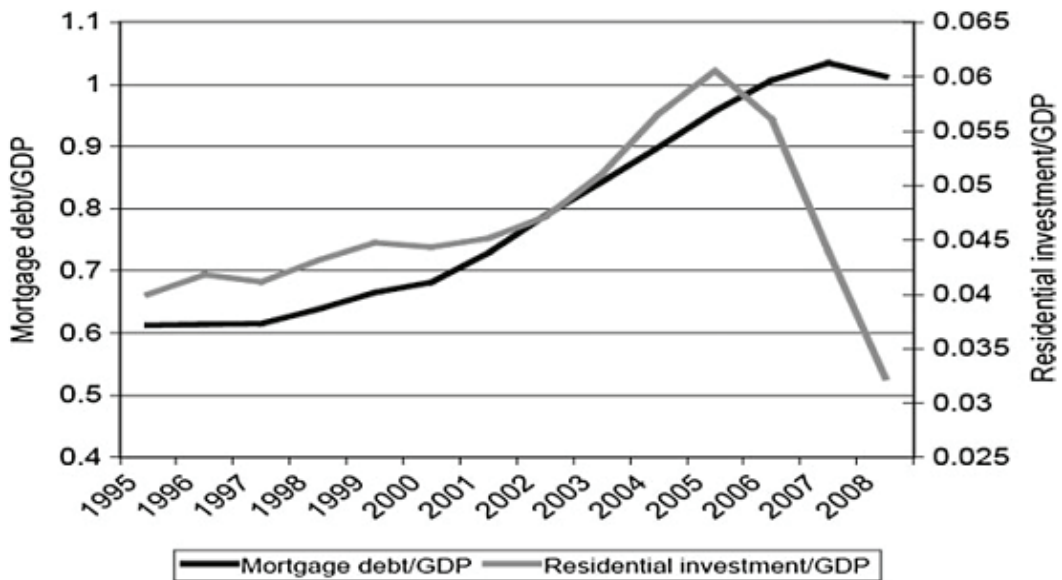


Fig. 3. Home Price Indices (Source: Standard & Poor)

the World Economic Crisis. These changes caused labor flexibility, wage moderation and increase of income inequality. Further Tridico delved into the mutual interdependence between labor market and financial market. According to the author, the relationship between those two markets during an economic crisis is extremely strong. On one hand, labor should be flexible and adjustable to the firms' needs. If a firm demands more labor, more labor supply should be available and vice versa, if a firm does not have a large demand for labor, the demand should be contracted. The financial sector on the other hand is in favor of economic deregulation, which leads to increased labor flexibility. The rest of the economy follows the financially set regime with flexible labor and fixed wages. Next the author analyzed the degree of financialization of different countries and the effect of financial markets on the labor market and the economy as a whole. According to the data presented by Tridico, the highest degree of financialization belongs to Switzerland. In terms of absolute value, however, the highest degree of interdependence between the financial market and economy as a whole belongs to the US. The author introduced the term hyperfinancialization, defined as an excessive financialisation of the markets as well as an excessive relation between the financial market and the economy as a whole. Tridico postulated that hyperfinancialization first started in the US, but relatively fast spread over all Europe. The author studied the financial figures to support his findings. Tridico discovered a positive and strong correlation between level of market financialization and income inequality. In general, the Anglo-Saxon countries have a higher degree of financialization compared to the rest of the countries, but prevalence

of financial markets over economy in many other European countries could be observed. The author further deepened his analysis of the correlation between financialization and labor flexibility. A flexible labor market with compressed wages has to be supported by available financing. Hence a financial market has to develop financial tools to support labor market and wages, which otherwise would be unstable. Therefore a large number of financial tools have been developed to support flexible labor and stable wages. However, these financial tools finance consumption, which postpones payments, extends credits and creates extra consumption. In that way income inequality, which has dramatically increased lately, does not lead to consumption inequality, since consumption has been supported by various types of credits. There are at least two reasons why society needs consumption. First, the big amount of savings created in Asia have to be supported by a respective consumption of goods and services as well as by proper investments and second, low consumption of goods and services might lead to firms having goods and services unsold. Financial innovations and cheap money enable workers to buy relatively expensive cars and houses. Such a model of consumption is very unstable since consumption is mostly financed by credits and that is one of the reasons for the financial crash in the late 2007. Further Tridico hypothesized that wage inequality and low productivity and flexibility lie at the basis of an economic crisis. Probing deeper into the basis of the economic crisis which started in the US, the author claimed that the stagnation of wages combined with a productivity growth was crucial for the US economy and led to increased profits for the firms. Tridico established that a rise in wages correlated with GDP growth rate is lower in

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the US compared to the European countries and its share of the US GDP had fallen in the last years. Flexibility and stagnant wages on the other hand, Tridico argued, mutually contribute to a new finance-led model of accumulation. Labor flexibility and unstable and insecure jobs increase demand for credits to finance consumption. Wolf (2010) and Tridico (2012) established that after more than 150 years of economic growth, the US 1973 wages stagnated, which means that even though productivity continues to grow, consumers' purchasing power stays the same and therefore productivity declines. Wage inequality increased dramatically reaching a gap of 40% in the mid 2000s compared to a 28% gap in the mid 1970s'. Tridico found out that compressed and lost wages were replaced by certain financial tools such as credits and financing. According to the data gathered by the author, US consumers enjoyed a relatively high purchasing power even with stagnant wages due to credit availability. Data show that between 1973 and 2007 the productivity in the US increased by 83% while the hourly wages increased by only 3% for the same period of time, which led to a greater inequality. Tridico established two important things. First, the author found that the productivity in Europe did not grow as much as the productivity in the US, particularly after 1980. Second, in contrast to the US wages, the wages in Europe continued to grow after 1973 but with a lower rate compared to the wage growth rate between 1947 and 1973. After 1990, however, the wages in Europe stopped to increase in the author's view. Hence, since 1990 we have had lower productivity in Europe than that in the US and stagnant wages. Still, even though we had stagnant wages combined with relatively lower productivity in Europe after 1990, this did not lead to significant

increase in income inequality since in Europe unions traditionally have a strong presence and defend higher wages. The situation with the lower productivity and stagnant wages in Europe required increase in labor flexibility in the same fashion as it did in the US. This gave firms more power to determine wages, achieve profits and ensure better working conditions for workers. Similarly to the US, unstable wages and jobs in Europe were financed by various kinds of credits, which means that in Europe demand for financing of consumption had emerged, even though a bit later than in the US. That caused bad interactions both in the US and European economies, primarily led by the finance regime. Tridico further said that such bad interactions affect labor, finance, consumption and investments, creating financial instability and an economic crisis. Tridico concluded that such an extreme finance-led model, which fails to distribute productive gains, compresses wages, increases income inequality and labor flexibility and relies mostly on credit-wise financing, lacks stability as well as productive investing. This model normally is subject to recurring bubbles and instability, and requires radical change.

Claessens, Wei and Tong (2011) revealed another aspect of the consequences of the economic crisis. In their article "From the Financial Crisis to the Real Economy: Using Firm Level Data to Identify Transmission Channels," the authors used accounting data from 7 722 non-financial firms in 42 countries and examined how the 2007-2009 crisis affected firm performance and how various linkages caused economic shocks across the borders. To achieve their purpose Claessens, Wei and Tong (2011) used firm-level data that allowed them to distinguish different transmission channels, through



which the economic crisis started in the US and spread out across borders and affected other countries. The authors found three possible channels: the financial channel, the domestic – demand channel and the trade channel. In order to make their analysis, the authors isolated each of the channels and examined their effect separately. For example, to isolate the transmission through the financial channel the authors applied the idea that if decrease in the available credit affects firm performance, firms that would be most affected would be those that rely predominately on external finance and investments as opposed to these firms that rely less on external financing. By the same token, the trade channel would be isolated because a decline in trade would affect mostly these firms that rely predominantly on external trade. And finally if a crisis produces a negative domestic demand shock, this will affect primarily these firms that are more demand-sensitive compared to less demand-sensitive ones. Further, Claessens, Wei and Tong (2011) developed an empirical model to encompass the changes of firm level performance which is the result of the economic crisis. Their next step was to relate firm performance to country performance. For example firms in more open countries are more likely to see their firms suffering from trade and financial shocks. The authors examined the interactions between firm features and country features. In order to see how firms are affected by changes in domestic and international financial conditions, the authors considered the degree of international financial integration and manufacturing firm dependence on external finance. Special attention was paid to certain country characteristics such as financial openness, relative importance of

domestic demand, degree of trade openness, and level of domestic financial development. In order to encompass the effect of the variables listed above on firm and country performance respectively, Claessens, Wei and Tong (2011) constructed a regression model to predict firm performance on the basis of the variables of financial dependence, demand sensitivity, trade sensitivity and control. The authors used the annual data of 42 advanced countries and emerging markets. Key dependent variables were the changes from the period of 2007-2008/2009 in three ratios: firm-profit, sales-assets, and investment-assets. Analyzing the data, Claessens, Wei and Tong (2011) observed that firm investments entered the crisis phase later than profitability did. Further, the authors developed two measures for firm financial dependence, namely intrinsic dependence on external finance for investment and intrinsic dependence on external finance for working capital. Then the authors used these variables to define the firm's actual use of external financing for working capital as well as the actual use of external financing for investments. Next they calculated the variables using actual data for firm performances and calculated the median of these variables over the period 2000-2006. Using the actual firms level indicators, the authors defined whether firms that had been more dependent on external financing prior to the crisis were more affected by the global crisis. The next step of Claessens, Wei and Tong was to define their index for the firm's relative sensitivity to a contraction in aggregate consumer demand. The authors noted that the effect of an economic crisis on consumer demand may vary according to the type of the product and sector. Claessens, Wei and Tong (2011)

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developed their pre-crisis sensitivity index as elasticity of firm-specific sales to the country's GDP in the six years before the crisis i.e. 2000-2006. The authors also constructed a sector-level variable, which encompasses the firm's exposure to trade. For the purpose Claessens, Wei and Tong developed a measure of the firm-level sensitivity to trade shocks. To do so, the authors regressed the annual sales change of a firm on the annual percentage change in its home country exports over the period 2000 to 2006. This measure is firm-specific; it varies across firms, sectors and countries. After constructing the three main indexes which account for firm sensitivity to trade shocks, domestic demand shocks and financial shocks, Claessens, Wei and Tong began their empirical analysis of the results. First they examined the impact of a crisis on the firm's profit/assets ratios. Claessens, Wei and Tong established that impact on profits is more pronounced for those sectors that are intrinsically more sensitive to demand shocks. According to the authors, that was clear evidence of the presence of a serious demand shock during the economic crisis and firms had to adjust to this significant change in demand. Next the authors analyzed the impact of the economic crisis on the firms' profits. The authors findings proved that the impact of the economic crisis on the firms' profits was more significant for those firms that operated in more trade-sensitive sectors as opposed to firms that operated in less trade-sensitive sectors. The result was in line with the decline in global trade during the crisis period. Further the authors looked into the impact of the crisis on sales over assets. According to the results, sales appeared to decline considerably for those firms that operated in more trade and

consumer demand sectors, in contrast to those firms which operated in less sensitive to consumer demand and trade sectors. At the same time the sales decreased more significantly for those sectors which had a more intrinsic need for working capital. This implies that the irregular supply of working capital caused by the economic crisis could lead to a reduction of the firm's level sales as well as to a reduction of firm's stock prices. The regression results found no significant impact of the economic crisis on investments, which as the authors pointed out was to be expected given that future profits from investments are difficult to predict. Their next study was of the role of country factors. In order to analyze the different effects of the economic crisis Claessens, Wei and Tong included the following country characteristics in their statistical model: financial openness, financial development, trade linkage, and the share of domestic expenditure in the total demand. These country variables were interacted with three main variables describing firm performance, namely financial openness, relative importance of domestic demand, and the trade-sensitivity variable. For example country-level financial openness and financial development are related to the firm's financial openness, country-level trade linkage is interacted with the firm's trade sensitivity variable and country-level domestic expenditure share is related to the sector-level demand sensitivity. Interpreting the results from the statistical regression, Claessens, Wei and Tong established a significant negative interconnection between the firm's trade sensitivity variable and the country-level trade linkage variable. The statistical results also suggested that the openness of a country to trade and finance has a negative

impact on firms operating in this country during times of crisis. In fact increase in country-level trade linkage will reduce the firm's profit at the time of crisis. The same increase of country-level trade linkage will reduce the firm's sale/asset ratio as well as the firm's capital expenditures to asset ratio. Overall, the regression results suggest that country-level trade openness is a statistically significant and economically important channel in the global transmission of the crisis. Claessens, Wei and Tong also discussed the policy measures taken by the countries during the economic crisis. In order to cope with the consequences of the economic crisis, countries took various kinds of policy measures. These measures included a broad range of activities and varied from monetary easing and fiscal stimuli to financial sector interventions, such as liquidity support, recapitalization, and guarantees and direct support to real sectors. These policies tended to help the countries to overcome the negative effects of the economic crisis. The authors determined furthermore that in extreme cases some countries adopted counter-cyclical policies running the economy against business cycle. They focused on whether and how these policy measures counteracted the negative effects of economic crisis; whether countries' monetary and fiscal stimuli alleviated the impact of crisis in general and how they affected the severity of the demand and financing channel in particular. The next step of Claessens, Wei and Tong was to examine the impact of monetary stimulus on profits, sales and investments through the financing channel. The authors' findings suggest that the fiscal stimulus interacts with demand sensitivity and has a positive effect on it. With regard to sales and investments, Claessens,

Wei and Tong found no significant relationship between the fiscal stimulus and the profits and investments. Further the authors proposed and used a second measure for financial stimulus, namely the change in the money base over GDP from September 2008 to March 2009. This measure of financial policy happened to have a positive effect on the firm's profits and an insignificant effect in the case of investments. Overall, Claessens, Wei and Tong established some positive impact of the fiscal stimulus acting through the demand channel and a strong positive impact of the monetary stimulus operating through the financial channel and affecting the working capital. Next, the authors used a proxy for a trade channel, more particularly the percentage change in exports between 2007 and 2009 at a sector level for each country where the firm was located. This measure presumably captures the trade channel more directly, because it measures the degree to which exports decline. Claessens, Wei and Tong found that the country-level decline of exports at the time of the economic crisis (2007 - 2009 period) was associated with the decline of firm-level profits, sales and investments over the same period, with a stronger effect on profits. Moreover, the authors established a significant negative impact of the crisis through the demand channel on the change in the firm's profits and sales, they also found evidence of a negative effect through the financial channel with regard to investments on the change in profits. Their next step involved moving from the sector level to the firm level. For the purpose the authors applied the actual firm-level dependence on external finance for investments, firm-level working capital usage, firm-level demand sensitivity and trade sensitivity. Claessens,

Wei and Tong replaced their sector-level measures of demand and trade sensitivity with a firm-level measure. An analysis of the data showed that during the time of crisis profit rate is significantly lower for firms that are more demand-sensitive. With regard to change of sales over assets, the authors found that the coefficient on demand and trade sensitivity is negative and statistically significant, which concurred with the findings based on sectoral level measures of sensitivity. Another finding that came as result of the regression showed that firms with higher trade sensitivity tend to adjust their capital expenditures downwards during time of crisis. Finally Claessens, Wei and Tong took another look at the interaction between the firm's performance and the economy of the country in which the firm is located during the time of crisis. For that purpose the authors ran a regression including the interaction terms between firm-level sensitivity and country features. With regard to change in profits the regression results showed that there was a significant relationship between the country's financial development and the firm's investments. Claessens, Wei and Tong established a revelatory interaction between changes in the firm's capital expenditures and the country's financial dependence; ergo changes in the country's economy caused by changes in the financial channel during the time of crisis have an impact on the firm's financial activities as well as the firm's profits and the firm's sales. Thus the firms with lower profitability had to obtain more external financing. Last but not least, the authors found a statistical significance between a firm's trade sensitivity and the firm's changes in sales and capital expenditures. In conclusion, Claesens, Wei and Tong

examined the changes during the crisis period in three measures of the firm performance - sales, profits and capital expenditures. The authors examined the links between the firm's performance and the economy of the country in which the firm operates. For that purpose Claessens, Wei and Tong observed 7772 firms from 42 countries. According to the authors, the changes in the country's economy were transferred and affected the firm's performance through three channels – the trade channel, the demand channel and the financial channel. Claessens, Wei and Tong established that trade channels played the most significant role in transferring changes from the country's economy to the firm's performance. In end the authors pointed out that for a comprehensive assessment of the welfare effects of global linkages to be achieved, additional aspects had to be studied. For example one of the important aspects that have to be examined is how different forms of global linkages affect the firm's external financing constraints and growth rates before a crisis. Claesens, Wei and Tong left this analysis for a possible future research.

### 3. Data and empirical research

As we pointed out in our theoretical part, according to Claesens, Wei and Tong there are three main types of transmission channels through which the negative side effects of the World Economic Crisis have been transmitted, namely: the financial channel, the domestic-demand channel and the trade channel. The subject of our study is to empirically estimate the impact of the World Economic Crisis on the countries of the Balkan region and identify through which of the main transmission channels the negative side-

effects of the crisis affected the countries of Balkan region. For the purpose of our analysis we restricted our sample only to countries whose land is entirely within the territory of the Balkan Peninsula. Therefore we include only the following countries in our sample: Albania, Bosnia and Herzegovina, Bulgaria, Greece, Kosovo, Republic of Macedonia and Montenegro. Since we consider the beginning of the World Economic Crisis to be the end of 2008 for the US and the beginning of 2009 for the European countries, we confine our observed crisis period to years 2009 - 2012. For this four-year crisis period (2009-2012), we examine three important macroeconomic factors of the listed above countries' economies, namely GDP per capita measured in US dollars, unemployment rate measured in percent and inflation rate measured also in percent. We analyze the changes in those macro-parameters to encompass the effect of the economic crisis on the countries of the Balkan region. We obtain the relevant macroeconomic data from the Index Mundi web-site, which contains the most detailed country statistics, charts and maps, compiled from multiple sources. Our empirical analysis follows below.

According to the data in table 1 for the period 2009 - 2012, the Albanian GDP per capita increases slightly from 7700 US \$ to 8200 US \$, which is an increase of about 6.5%. For the same period the unemployment increases from 12.8% to 13.3%; this corresponds to an increase of 0.5%. The Albanian inflation rate for the period 2009-2012 has changed from 2.2% in 2009 to 2 % in 2012, which is a decrease of about 0.2 %.

For the period 2009-2012 Bosnia and Herzegovina's GDP per capita has decreased from \$ 6,500 to \$ 8,400, which represents an increase of 29% (table 2). For the same period the unemployment rate has increased from 40 to 43.3% or we have an increase of 3.3%. Finally, we observe a relatively significant increase in the inflation rate. For the period of 2009-2012 the inflation rate has increased from a deflation of -0.4% in 2009 to an inflation of 2.1% in 2012, which represents an increase of 2.5 %.

For the period 2009 - 2012 the Bulgarian GDP per capita shows a slight increase from \$ 12,600 in 2009 to \$ 14,500 in 2012 or an increase of 16 %. For the same period the unemployment rate has increased from 9.1 to 11.1 percent, which corresponds

Table 1. Albania

year	2009	2010	2011	2012
GDP/capita US \$	7700	8000	7800	8200
Unemployment rate %	12.8	13.5	13.3	13.3
Inflation rate %	2.2	3.6	3.5	2.0

Source: [www.indexmundi.com](http://www.indexmundi.com)

Table 2. Bosnia and Herzegovina

year	2009	2010	2011	2012
GDP/capita US \$	6500	6600	6200	8400
Unemployment rate %	40.0	43.1	43.3	43.3
Inflation rate %	-0.4	3.1	3.7	2.1

Source: [www.indexmundi.com](http://www.indexmundi.com)

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Table 3. Bulgaria

year	2009	2010	2011	2012
GDP/capita US \$	12600	13500	13800	14500
Unemployment rate %	9.1	9.2	9.6	11.1
Inflation rate %	1.6	4.4	4.2	3.0

Source: [www.indexmundi.com](http://www.indexmundi.com)

to an increase of 2%. For the period of 2009 - 2012 the inflation rate has shown a significant change from 1.6% in 2009 to 3 % in 2012 or an increase of 2.4 %.

GDP per capita shows signs of an increase. Thus Kosovo's GDP per capita increases from \$ 5,449 in 2009 to \$ 6,500 in 2011, which is a significant increase of 19.2%, regardless

Table 4. Greece

year	2009	2010	2011	2012
GDP/capita US \$	31000	29600	29600	24900
Unemployment rate %	9.4	12	17.3	24.3
Inflation rate %	1.2	4.5	3.3	1.5

Source: [www.indexmundi.com](http://www.indexmundi.com)

Undoubtedly Greece is one of the countries in the Balkan region that has been most affected by the world economic crisis. Thus for the period 2009 - 2012 the Greek GDP per capita has decreased from \$ 31,000 to \$ 24,900 which is a decrease of 19.67 % for a two year period. For the same period the unemployment rate has shown a significant increase from 9.4% in 2009 to 24.3% in 2012, which is an increase of about 14.9 %. Finally, the inflation rate for the same period has increased from 1.2% in 2009 to 1.5 percent in 2013, or an increase of 0.3 %.

of the economic consequences of the crisis. The unemployment and inflation rate further indicate a relatively stable economy in Kosovo even during the crisis period. For example, although Kosovo's unemployment rate is very high in 2009 – about 45%, there is a very slight increase of unemployment in the period under review - from 45% in 2009 to 45.3% in 2011, which is an increase of 0.3%. For the same period the inflation rate has increased by 3% from 5.3% in 2009 to 8.3% in 2011.

For the observed crisis period from 2009 to 2012, the Macedonian GDP per capita

Table 5. Kosovo

year	2009	2010	2011	2012
GDP/capita US \$	5 449	6600	6500	n/a
Unemployment rate %	45	n/a	45.3	n/a
Inflation rate %	5.3	3.5	8.3	n/a

Source: [www.indexmundi.com](http://www.indexmundi.com)

For the crisis period 2009 – 2011 (we do not have data for 2012 for Kosovo), Kosovo's

shows a significant increase despite the negative effects of the economic crisis. Thus

Table 6. Republic of Macedonia

year	2009	2010	2011	2012
GDP/capita US \$	9 100	9 700	10 500	10 800
Unemployment rate %	32.2	31.7	31.4	31.3
Inflation rate %	-0.8	1.6	3.9	3.1

Source: [www.indexmundi.com](http://www.indexmundi.com)

GDP per capita in Macedonia has increased from \$ 9,100 in 2009 to \$ 10,800 in 2012 or an increase of nearly 18.6%. For the same period the unemployment rate in Macedonia decreases from 32.2% in 2009 to 31.3% in 2012 or decreases by 0.9%. The inflation rate in Macedonia for the observed period shows an increase of 3.9%, from a deflation of -0.8% in 2009 to an inflation of 3.1% in 2012.

19.1 in 2012 or an increase of 4.4%. The inflation rate increases slightly by 1.3 % from 2.7% in 2009 to 4% in year 2012.

The data presented in table 8 show that the GDP per capita for Serbia increases during the observed period. Thus the GDP per capita for Serbia has risen from \$ 10,600 in 2009 to \$ 10,800 in 2011, which is a steady increase of about 1.85%. Then

Table 7. Montenegro

year	2009	2010	2011	2012
GDP/capita US \$	9800	10 100	11700	12000
Unemployment rate %	14.7	n/a	11.5	19.1
Inflation rate %	2.7	n/a	3.0	4.0

Source: [www.indexmundi.com](http://www.indexmundi.com)

The data presented in table 7 show that the GDP per capita of Montenegro increases during the observed period. Thus the GDP per capita in Montenegro has increased from \$ 9800, in 2009 to \$ 12,000 in 2012, which is a steady and significant increase of about 22.4%. For the same period we observe an increase of the unemployment rate from 14.7% in 2009 to

the GDP per capita falls back to the level of 2009 or 10600 US \$ in 2012 which results in zero percent change for the observed period 2009-2012. For the same period we observe a rise in the unemployment rate from 16.6% in 2009 to 25.9% in 2012 or an increase of 9.3%. The inflation rate decreases slightly by 1.1% from 8.4 % in 2009 to 7.3% in 2012.

Our findings show that the economic crisis has a different effect on the countries

Table 8. Serbia

year	2009	2010	2011	2012
GDP/capita US \$	10600	10900	10800	10600
Unemployment rate %	16.6	19.2	23.4	25.9
Inflation rate %	8.4	10.3	11.2	7.3

Source: [www.indexmundi.com](http://www.indexmundi.com)

of the Balkan Region. Undoubtedly, Greece appears to be the country most affected by the economic crisis and shows a significant decrease in GDP per capita as well as a significant increase in the unemployment rate and the inflation rate (table 4). Albania shows a relatively stable economy in the crisis period without a substantial decrease in the GDP per capita, neither a substantial increase of inflation rate and unemployment (table 1). Similarly to Greece, Bosnia and Herzegovina experienced the negative effect of the economic crisis. As we see from the data in table 2, in Bosnia and Herzegovina the GDP per capita decreases for the observed period by 29%. The decrease in GDP per capita is followed by a 3.3% increase in unemployment as well as an increase in the inflation rate by 2.5%. During the crisis period, the Bulgarian GDP per capita increases substantially by 16% for four years, and we can report a very slight increase in the unemployment and inflation rates during the same period, which proves that Bulgaria exhibits a stable economic growth during the observed period (table 3). For the observed crisis period Kosovo has achieved a significant increase of its GDP per capita which increases by an amount of 19.2% for the three-year period (we do not have data for 2012 for Kosovo). Even though Kosovo has about 45% unemployment at the beginning of 2009, at the end of 2011 the unemployment increased only by 0.3%. For the crisis period Kosovo shows about 3% increase in inflation, roughly by 1% per year (table 5). Despite the negative impact of the economic crisis, the Republic of Macedonia shows an increase in the real GDP per capita during the observed period of 18.6%, the unemployment rate decreases by 0.9% and we have an increase in the inflation rate of 3.9%. These data are proof of economic growth in the Republic of Macedonia even during the economic crisis (table 6). Indications of growth during the

crisis period can be found in the economy of Montenegro as well. For the observed crisis period 2009 – 2012, the GDP per capita in Montenegro rises substantially by almost 22.4%. Despite the expectations for a significant negative effect on the economy during the crisis period, the unemployment in Montenegro increased slightly by about 4.4%. The inflation increase of about 1.3% for the same period is insignificant. Even with the negative side effects of the World Economic Crisis during the observed period, the Serbian GDP per capita shows a stable trend varying from \$ 10,600 in 2009 to \$ 10,600 in 2012 or an increase of about 0%. However, the unemployment rate has increased by about 9.3%, which could be viewed as a significant increase in a four year period. The inflation rate is relatively stable, showing a slight decrease of 1.1%.

Based on the data reported we can conclude that the negative effects of the economic crisis were felt most strongly in Greece and Bosnia and Herzegovina while the rest of the countries in the Balkan region demonstrate relatively stable economies and a steady economic growth even during the crisis period (years 2009 - 2012). Surprisingly, our empirical findings did not indicate a strong negative impact of the World Economic Crisis on the economies of the Balkan countries. In fact, according to the data, the countries from the Balkan region showed a relatively stable economic growth even during the crisis period, i.e. after 2009. The transmission channels identified by Claesens, Wei and Tong could be the answer to why these countries responded differently to the crisis. We can rule out the trade channel and domestic demand channel, since most of the countries in the Balkan region have relatively poor trade relations with the US and do not have a significant domestic demand on US produced goods. Hence the financial channel, which is the



most important one, according to Claesens, Wei and Tong, appears to be the only channel to transmit the negative side effects of the economic crisis that first started in the US to the countries of the Balkan region. However, because of the different financial mechanisms as well as the independence of the European banking system from the US banking system, the strain on the US banking system slightly affected the banking system in Europe. Therefore, the Balkan region countries did not experience the negative impact of the World Economic Crisis and continued to show a stable economic growth even in the years after the beginning of the crisis.

### **Conclusion**

In the end of 2007 and the beginning of 2008, the US economy experienced the first symptoms of economic slowdown. Warning signs of increased unemployment and decreasing output were detected in the US economy. Contrary to the government efforts for an economic revival, the economic slowdown continued to deepen and by the end of 2008 the US economy faced the largest financial shock since the Great Depression of 1929. The crisis that originated in the United States was gradually transferred across the Atlantic and by the beginning of 2009 strongly affected all the European countries. Three are the channels through which the economic crisis transferred its negative effects from the US to Europe according to Claessens, Wei and Tong: the trade channel, the demand channel and the financial channel.

In our paper we have conducted an empirical analysis of the effect of the World Economic Crisis on the economies of the countries of the Balkan region. We restricted our analysis to those countries which entirely lie within the Balkan Peninsula. We have looked at the three important macroeconomic features: the real GDP per capita, the unemployment

rate and the inflation rate. We detected and analyzed the changes of those three variables during the observed crisis period 2009-2011.

Our findings show that the most affected countries by the World Economic Crisis are Greece and Bosnia and Herzegovina, which show definite signs of recession. However we established that the rest of the countries in the Balkan region continue to show a relatively stable economic growth even during the crisis period, confirmed by a constant increase of the GDP per person and a decrease or a slight increase of the unemployment rate and the inflation rate. Some economists claim that the reason for the continuing stability and economic growth even during a period of crisis, which most of the Balkan region countries exhibit, is the fact that the banking system of Eastern European countries was independent from the banking system of the Western European countries and the US banking system per se. Therefore most former Eastern European countries tend to be less affected by the negative consequences of the World Economic Crisis (for example Bulgaria) as opposed to countries that were closer to the Western European countries (for example Greece). Whether the economic crisis will affect more deeply the countries in the Balkan region that were part of the former Eastern Bloc in the forthcoming years will be left to a future research.

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