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SOUTHEASTERN EUROPE: POST-CRISIS PROSPECTS AND RISKS

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Abstract

The Southeast European (SEE) countries have strong roots in social and historical terms. Their experience of the last couple of decades indicates, however, that SEE is in continual change and transformation: They want to attain more open societies, functioning markets and well-knit international affairs. This paper examines the economic prospects of the SEE countries from the eye of outsiders. Specifically, we investigate the strength of intra-SEE economic ties, stability at the nexus of financial and real sectors, propagation of shocks from the major economies of Europe to the SEE, and uncertainties surrounding the SEE countries. Along each of these dimensions, we maintain a comparative perspective, spatially relative to continental Europe and Turkey and temporally relative to the pre-crisis period.

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1. Introduction

In the past few decades, the SEE countries[1], with deep social and historical roots, have been undergoing a dramatic change and transformation: They want to attain more open societies, to foster functioning markets and to establish strong international relations. In this respect, the SEE countries deserve special attention.

In this paper, we examine the economic prospects of the SEE economies. We try to address (1) the strength of the internal economic ties of the SEE countries, (2) stability at the nexus of financial and real sectors, (3) propagation mechanisms of shocks from the major economies of Europe to the SEE, and (4) uncertainties surrounding the SEE countries. Along each of these dimensions, we maintain a comparative perspective, spatially relative to continental Europe and temporally relative to the pre-crisis period. In conducting our analysis, we utilize several different approaches and techniques. We ultimately combine our spatial and temporal findings in order to obtain a holistic strategy for financial stability and sustainable growth.

The reader must note that the authors of this paper have the viewpoint of an outsider. So, in order to avoid far-reaching conclusions, we focus mainly on the general similarities and clear-cut differences among the countries of interest. Country-specific information is intentionally left untouched.

The remainder of the paper is laid out as follows: We start with a brief overview of the economic developments in the SEE countries during the last decade. In sections 3, 4 and 5, trade, equity market and credit exposures of the SEE economies are investigated, respectively. In Section 6, we synthesize our findings to obtain an assessment of the short-to-medium term sources of instability. Section 7 is then reserved for the discussion of long-term challenges. The final section concludes the article by formulating some strategies for future.

2. Economic Background in the SEE Countries

The macroeconomic outlook of the SEE region in the last decade can be analyzed in two sub-periods as "before" and "after" the global crisis. During the good global economic conditions of 2000-2008, the SEE countries laid the foundations of a functioning market economy and relatively sustained macroeconomic stability. With the onset of the global economic crisis, however, the SEE countries entered into a macroeconomic environment of long-lasting uncertainty.

Macroeconomic developments in the SEE countries were relatively favorable in the earlier sub-period. Real GDP growth performance was astounding in all SEE countries until the recession in

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[1] Albania, Bosnia Herzegovina, Bulgaria, Croatia, Kosovo, Macedonia, Montenegro, Romania, Serbia and Slovenia. The data for EU and Turkey is also provided in order to present a comparative perspective for the reader.

2009 (Constancio, V., 2011). Nominal GDP doubled during this period and the rise in the European Union (EU) member SEE countries was much more noticeable. Similarly, GDP per capita increased impressively in a majority of the SEE countries (Gardo, S. and R. Martin, 2010). Inflation was relatively steady at single digit levels, while Romania and Serbia experienced very successful disinflation episodes in this period.

[TABLE 1: Macroeconomic Indicators]

Not all economic problems were tackled in this period, however. In particular, several SEE countries accumulated various degrees of external and internal imbalances (Constancio, V., 2011). Also, most SEE countries were unable to find a permanent solution to high unemployment. In particular, unemployment rates in Serbia, Macedonia, Kosovo, and Bosnia Herzegovina were more pronounced in comparison to other SEE countries. Growth rates were high, but not high enough to create employment and push unemployment rates down. The contribution of net exports to economic growth gradually declined, while the contribution of private consumption to growth increased steadily prior to the global economic crisis (Gardo, S. and R. Martin, 2010). Moreover, current account deficits became a chronic problem of all SEE countries in this period. Export of relatively low value-added products and the import of high value-added products was a major source of the chronic current account deficits in these countries (Jazbec, B. and A. Kastrati, 2011). As imports continuously outperformed exports due to strong domestic demand, current account deficits deteriorated over the course of the period. Besides, current account deficits were increasingly covered by capital inflows, mainly in the form of short term capital. On the fiscal side, consolidation efforts delivered successful results in SEE countries, where Bulgaria, Serbia, and Montenegro were the forerunners of fiscal discipline. Budget deficits and public debt dropped below the Maastricht criteria, creating enough maneuver space after the global economic crisis.

With the outbreak of the global economic and financial crisis in 2008, the macroeconomic outlook started to deteriorate for the countries in the region. Financial contagion from the global financial crisis was limited, but the swing in real economic activity in the SEE countries was stronger than that in the EU economies. In general, economic growth collapsed and only Albania, Kosovo, and Bosnia Herzegovina managed to avoid a recession in 2009. With the weak recovery in 2010, economic growth was far slower than the pre-crisis period in most SEE countries. Uncertainty in the region increased further with the Eurozone (EZ) debt crisis. Along with trade spillover effects from the lackluster growth in the EU, current account deficits deteriorated in 2011 after narrowing sizably in 2010. Financing of the current account deficits has continued to be a challenge due to the slowdown and sometimes reversals in capital inflows. Most SEE countries introduced large fiscal packages to tackle the crisis, which resulted in a sharp increase in budget deficits and public debt.

Fiscal buffers dried up in most SEE countries during the crisis and governments were forced to impose further consolidation in 2011, even though economic recession in the EU required the opposite (European Commission, 2012).

Financial sectors in most SEE economies are specialized in traditional banking activities. This prevented these economies from high levels of exposure to toxic financial assets following the crisis. Therefore, spillover effects due to the crisis was limited. For all that, banking systems in the region display more resilient characteristics such as high liquidity and significant capital buffers at present (World Bank, 2011). However, there are some features that might weaken the strength of the banking systems in the SEE economies. In advance of the global financial crisis, access to international capital markets with low external financing costs contributed to rapid credit growth in most SEE countries. This easy access to foreign sources of capital appears to have significantly weakened in the current setting of the EZ debt crisis. The banking sector lending capacity and indirectly real sector borrowing in several SEE economies is dependent on foreign financing from European parent banks. However, this dependence is not as high as in the Baltic countries and some CEE countries. In particular, in some SEE countries exposure is very high to Austrian, Italian, and Greek banks (World Bank, 2011). Hence, strong recapitalization needs of these banks pose an indirect risk to the financial sectors and economies of the SEE.

Non-performing loans (NPL) create a further risk for the banking sectors in the region since the global economic crisis. To cushion the risks arising from NPL's, banks in Kosovo, Albania and Montenegro started to cut loans by increasing the interest rates for lending, whereas in Serbia and Macedonia the main reason for higher lending rates was to avoid the depreciation of the currency (Jazbec, B. and A. Kastrati, 2011). The result of higher lending rates mirrored in further low credit growth in the region. In many SEE countries, banks have increased the interest rates for deposits as well, indicating their search of new sources for funds, especially after the deleveraging process of EU banks.

3. SEE as an Economic Region: Trade Exposure

The 2008-2010 financial crisis was significant in a number of ways. First, it was of a transcendental scale. Second, it was associated with long-lasting uncertainties. Indeed, the root cause of these two symptoms were nothing but systemic problems. In this section, we examine the SEE economies from the perspective of trade ties and try to understand the extent to which the SEE economies are connected to the rest of the world.

Despite their geographic proximity, SEE countries appear to have weak trade ties, reflected in low levels of intra-regional trade flows. A glance at the share of SEE countries in each other's exports reveals low figures, at least lower than what one would expect. This might be interpreted as an

indication of a poorly performing economic region and of a failure to exploit growth potentials. Tilting the perspective a bit, though, one may get a different picture.

In what follows, instead of referring to trade shares, we establish a more comprehensive basis on which to assess trade flows of the SEE countries. The empirical exercise of this section is straightforward: Based on historical data (1962-2009), we estimate a gravity specification of bilateral trade flows[2] for 130 countries and 48 years.[3] Upon the basic specification of gravity equation, no further information, like prior information on country groupings or trade areas, is included. This provides us with simple and genuine estimates of what has been happening on the trade front. In this way, a simple enough yet solid basis for comparison is established.

[Table 2: Revealed Functioning of the SEE Countries]

Based on our estimation of the gravity equation, we extract the fixed effect estimates for each cross-section, that is, for each pair of countries. A positive fixed effect estimate is interpreted as an indication of "above-average" or "augmented/strong" trade relationship between the respective pair of countries. Namely, the fixed effect estimates provide a direct answer to the question of "keeping all other factors constant, how strong is trade between two countries?". We then perform a straightforward counting exercise to compute the degree of internal and external attachment of countries displayed in Table 2.

In Table 2, we consider Southeast European Economies (SEE), EZ, the European Union excluding EZ (EU), Europe (European countries other than SEE, EZ and EU), Asian Tigers and the rest of the world.[4] The first value in Table 2 (0.86) is read as the number of positive fixed effects divided by total number of bilateral linkages. One can equivalently say that 86% of the possible positive trade linkages has been established among the SEE countries. In a similar fashion, 0.53 measures the intensity of trade relationships between the SEE and the Euro area countries.

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[2] The equation we estimate takes the form $\ln(EX_{ijt}+EX_{jit}) = a_0 + a_1*\ln(GDP_{it}*GDP_{jt}) + a_2*\ln(GDPPC_{it}*GDPPC_{jt}) + a_3*\ln D_{ij} + e_{ijt}$. The left hand side variable is the trade volume between countries i and j in period t. The explanatory variables are the natural logarithms of the product GDP and the product per capita GDP (of countries i and j) and geographical center-to-center distance between countries i and j. In the model, the volume of trade is assumed to be proportional to the combined economic size of the trade partners GDP per capita is a measure of product differentiation as well as specialization. Trade costs are captured by the geographical distance. Distance is also an indicator of the costs due to cultural differences. Needless to say, gravity analysis in economics directly borrows from the gravity equation of Newtonian physics where trade volume, product GDP and distance are respectively analogs of gravitational force, masses, and distance separating them.

[3] The maximum possible sample size for 130 countries and 48 years is about 375,000. However, due to partial availability of data, the maximum (minimum) number of usable observations is 187,207 (163,310). See Cunedioglu and Yucel (2011) for more information.

[4] See Table 1 for a full list of countries included in our gravity analysis.

Against this background, Table 2 reveals that the intensity of trade among the SEE countries is 0.86, which is the third greatest figure, following the EU countries and Asian Tigers. This suggests that the SEE has potential to benefit from further intra-regional trade.[5]

4. SEE Stock Markets: Degrees of Integration and Equity Market Exposure

In order to investigate the integration of SEE stock markets with their major peers and to capture the transmission of shocks from the US and European stock markets to the SEE equities, we next estimate a tri-variate GARCH model with Diagonal BEKK representation developed by Engle and Kroner (1995).[6]

Using estimation results, we compute time-varying conditional correlations in order to identify the level of integration of each country with the US and German stock markets and to explore the developments during times of financial stress.

[Figure 1: Estimated Conditional Correlations]

Conditional correlations between the German and US stock indices were very similar in all estimations with a maximum of 0.89, an average of 0.6, and a standard deviation of 0.16. Given the high level of integration between advanced stock markets, the average correlation of German and US stocks were taken as a reference, and using its standard deviations, levels of integration of SEE stock markets with German and US stock markets were identified.

Figure 1 reports 20-day moving averages and Hodrick-Prescott filtered trends of the conditional correlations of all SEE countries vis-à-vis German and the US stock indices, which display three distinctive features. Firstly, there are two groups of countries in terms of global integration. Croatia and Romania can be regarded as "moderately integrated" with European markets while their integration with US markets is limited. Remaining countries have rather low levels of integration with regional and global peers. If we look at Turkey for comparison, it stands out as the most integrated country, with a relatively "high level" of integration with European and global markets.

Secondly, even though the time span of our data is limited, it shows a trend of increasing integration of SEE stock markets with their advanced peers prior to the global financial crisis.

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[5] The lack of an explicit reference to pre-defined regions or country groups in estimation allows us to interpret the trade intensity figures as revealed intensities. Cunedioglu and Yucel (2011) further note that in terms of fostering strong internal trade relationships the ordering of the regions is: (1) EU15-Mediterranean countries [90%], (2) Mediterranean-OIC countries [89%], (3) East Asian countries [83%], (4) EU15 countries [78%], (5) Latin-Caribbean countries [64%], (6) Ex-Communist countries [50%], (7) other countries [48%], (8) Mediterranean countries [40%], (9) OIC countries [38%] and (10) OIC-Ex-Communist countries [30%].

[6] To cover the maximum possible number of countries in the region, we use daily returns of major national indices from February 6, 2006 to February 28, 2012, defined as daily percentage changes of index levels in local currency. System specifications are represented as national returns followed by German and US returns. Furthermore, in order to control for the global financial crisis of 2008-2009, we carry out a second set of estimations where one lagged value of US returns is introduced into German returns as an explanatory variable. As the results are very similar, we only present the latter set of results.

However, this was followed by a period of fragmentation. Although volatile, it can be argued that the integration trend has resumed recently.

Lastly, it is also evident that conditional correlations present clear peaks during the global financial turmoil following the collapse of Lehman Brothers and during the peak of the EZ debt crisis, which indicates a spillover from advanced equity markets.

5. Banking in the SEE: Credit Exposure

As mentioned in Section 2, the banking systems in the SEE region are relatively healthy, even so with financial sector difficulties that parent banks are facing currently. We now present a brief survey of developments in foreign financial flows to the region mainly for the last couple of years. BIS consolidated banking data on ultimate risk basis is used for the analysis[7].

It is clear from Figure 2 that prior to the global financial crisis, credit flows to the SEE countries was buoyant. This development is associated with the entry of foreign banks (mainly of EU origin) into the SEE market and subsequent large capital flows from parent banks to the SEE subsidiaries and affiliates. These flows were channeled primarily to private sector consumption and investment, which in turn led to high growth rates in the region.

[Figure 2 : Evolution of Claims in SEE]

However, underlying fragilities in the region surfaced during the global crisis. Foreign ownership in the banking sector is higher than 80% in most SEE countries, reaching 90% in some SEE countries. As parent banks entered into financial stress, it became increasingly uncertain whether subsidiaries and affiliates in the SEE region would get the financial flows that are necessary to support domestic economies (Jazbec, B. and A. Kastrati ,2011). Furthermore, as foreign currency loans had dominated the credit structure in some countries, exchange rate fluctuations became another source of concern.

As can also be seen in Figure 2, the initial reaction during the global crisis was a rapid drop of credit inflows to the region. However, in anticipation of the consequences of a sudden stop of financial flows to all stakeholders; international financial institutions, EU institutions, the largest banking groups in the region as well as the home and host country regulators established the "Vienna Initiative". With the objective of "supporting banking sector stability and lending to the real economy in crisis-hit Central and Eastern Europe" Vienna Initiative was initiated in Spring 2009, in the form of EU/IMF funded support packages to some countries as well as banking sector

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[7] In Figure 1, foreign claims by sector in SEE countries as well as the total country exposure defined as the sum of foreign banking claims, derivatives contracts, guarantees and credit commitments held by the BIS reporting banks.

commitment letters specific to country needs. Following the Vienna Initiative, financial flows to the region stabilized. Therefore, the initiative can be regarded as successful (De Haas et.al., 2012).

Following a recovery trend during the second half of 2010 and first half of 2011, another hike in global risk aversion prompted a second need of commitment by the parties involved. An agreement on the principles to avoid disorderly deleveraging in emerging Europe was reached by officials and private sector banks in Brussels in March 2012.

6. Sources of Instability: Short-to-Medium Term

The growth model of the SEE countries is mainly based on exports with a strong orientation towards the EU markets. Given the fact that the share of EU in SEE imports and exports is between 40% to 70%, a negative demand shock from the EU can seriously undermine the recovery process of the SEE economies. To verify this argument, the trade potential of the SEE countries was investigated through a simple gravity exercise in Section 3. The main findings of the exercise suggest that trade intensity among the SEE countries and with the rest of Europe is quite high. So much that trade intensity among the SEE countries ranks as third in the world after the US and East Asian countries. Thus, while observations suggest that the SEE countries have a high potential for trade with Europe, one should admit that they are also highly exposed to the spread of systemic risks among the SEE countries in case of external trade shocks.

Despite our claim in Section 1 that the SEE financial markets are less developed, we wanted to have a closer look at the markets and banking sectors of the SEE countries in sections 4 and 5. The tri-variate GARCH estimation results showed that stock market capitalization and integration with advanced stock markets remain limited in SEE countries. But, data also show that there is a clear trend of ongoing integration with advanced stock markets. Furthermore, spillovers from the advanced equity markets to the SEE markets during the global economic crisis suggest that these countries are not immune to external shocks.

Analysis of financial flows to the region has revealed a well-known phenomenon associated with financial liberalization. While high foreign ownership in the banking sector is an asset for market efficiency and financial stability in normal times, it might become a source of instability in times of financial distress in parent countries (Constancio, V., 2011). Likewise, unchecked credit expansion as well as foreign currency dominated credit structure can lead to serious imbalances in the economy.

7. Sources of Instability: Long Term

We next investigate the potential long term sources of instability in the SEE region. The dynamics of long term economic outlook is mainly based on two variables: Technological capacity and demographics. Technological capacity is excluded from the analysis due to problems with

availability and measurement of data. However, demographic trends of the SEE countries seem to provide valuable insights for the purpose of this paper.

Negative demographic trends are already evident in most SEE countries. In particular, the population is ageing and rapidly decreasing due to low fertility and migration. For two reasons, these trends imply a potential risk for future economic development. With no adequate technology transfer and infrastructure investment, shortage of human capital in the future will likely prevent these countries from reaching a maximum exploitation of the economic opportunities offered by EU membership process. Then again, rapid ageing and increase in the old age dependency ratio will lead to high social security burdens, ultimately creating risks for the long-term sustainability of public finances (EU Ageing Report, 2012).

[Figure 3: Population % Change (2000 – 2010)]

According to World Bank figures presented in Figure 3, the largest population decline in the SEE countries occurred in Romania and Bulgaria by 4% and 6%, respectively, from 2000 to 2010. In all countries, fertility rates were below the 2.1 children threshold, the natural replacement rate per woman for keeping the population on a flat line over time (EU Ageing Report, 2012). The drop in fertility rates was particularly dramatic in Bulgaria, Romania and Bosnia Herzegovina where, in line with highly negative population growth rates, fertility rates fell below 1.3 child.

[Figure 4: Old Age Dependency Ratio (2000 – 2010)]

The share of the working population stayed relatively steady in the SEE countries during this period. With the exception of Serbia, the share of population above age 65 increased in all countries. The increase was more evident in countries such as Albania, Bosnia Herzegovina, and Montenegro, while Bulgaria, Croatia, and Slovenia had the highest share of population above age 65. Furthermore, as reflected in Figure 4, old age dependency ratio increased in all SEE countries from 2000 to 2010. The highest old dependency ratios were in Bulgaria, Croatia, and Slovenia where the ratio was almost a quarter of the working age population in 2010.

[Figure 5: Old Age Dependency Projections (2010-2050)]

According to the long term UN projections displayed in Figure 6 , a sizeable decline in population is expected to take place in all countries except for Slovenia and Montenegro during the next 40 years. The most severe population decline will occur in Bulgaria and Bosnia Herzegovina with a decrease of 27% and 21%, respectively. Moreover, old age dependency ratios will rise substantially for all SEE countries. Projections indicate that old age dependency ratios will jump up to 40% to 50% in the SEE (UN Projections, 2012), while average old age dependency ratio in the EU is expected to double from 26% to 53% in 2050 (EU Ageing Report, 2012).

[Figure 6: Population Projections (2010 – 2050)]

8. Prospects and Risks: Setting up the Strategies for Future

Three structural characteristics of the SEE region should be kept in mind when setting up the strategies for the future. Firstly, the transition process is still continuing, labeling a period of substantial and fast transformation from planned to market economies in most SEE countries. Secondly, the EU integration motive is slowly replacing the transition feature, operating as a political and economic anchor in most countries. Thirdly, the political feature is gradually disappearing from the SEE scenery, but still surfacing from time to time in some SEE countries.

We think that short term macroeconomic imbalances and financial vulnerabilities can be managed through short-term stabilization policies; however, long term instabilities require structural solutions. In fact, we propose nothing different than already well-known but mostly distressing structural reforms that would increase potential long term economic growth in order to break the vicious cycle of weak economic fundamentals permanently. It is essential that countries in the region should not lose their appetite for structural reforms.

In particular, increasing competitiveness and diversification of export products should be a priority for the SEE countries, so that trade potential with the EU can be exploited at a maximum level. Given that most SEE countries are small open economies exporting mainly commodities such as metals and basic minerals, diversification of export products will insulate the tradable sector from large price swings in commodity markets. In addition, policies towards the diversification of export markets would also reduce the exposure of these economies to potential trade shocks. Also, necessary actions in order to secure a stable flow of worker remittances is vital for some SEE countries.

Policies to tackle high unemployment have utmost importance, as high unemployment has the potential to slow down the catch-up process in most SEE countries. Labor market reforms in order to increase flexibility and participation should remain a significant component of the development model in these countries. Labor market reforms should be combined with ageing and migration policies in order to overcome the potential negative impact of demographic trends.

For all transition economies, strong orientation towards market economy requires business friendly policies. Moreover, policies that foster innovation and technological development need to be designed urgently. This is important because these policies will not only enhance the competitiveness, but also minimize the effects of negative demographic trends in these economies. Strong incentives and structural measures should be in place for a better private sector environment. World Bank's Doing Business figures for the SEE countries show- that significant progress has been

made over the last decade. Especially, the performance of Macedonia deserves credit as the country ranks as 22nd in terms of business climate, a ranking even higher than the EU member SEE countries. Moreover, the conditions for attracting more FDI should be further improved in most SEE countries as foreign investment in the region is crucial for economic growth and for the development of essential infrastructure.

[Table 3: Doing Business in the SEE Economies]

The dependency of SEE economies on the EU and their exposure to the EZ debt crisis have been underlined many times in this paper. Slower than expected economic development in these countries can only be attributed partly to macroeconomic imbalances and high exposure to the EU economy. These countries managed to sustain macroeconomic stability and market liberalization in the early process of transition but failed to reach a momentum of sustainable development later. It seems that the missing part of the puzzle in these countries is the lack of institutional setting (Jazbec, B. and A. Kastrati, 2011).

This reasoning brings us back to the structural importance of the EU integration process for the SEE countries. As mentioned in the beginning, three structural features – the transition feature, the EU integration feature and the political and historical feature – continue to interact and influence economic and social development of these countries. However, ever since the EU integration process started to replace the transition process and political struggle in the SEE countries, the course of development in the SEE countries became more profound.

9. Conclusion

A number of different approaches and techniques have been applied in this paper in order to take an account of the risks and prospects in the SEE countries after the global economic crisis. We have investigated the trade ties of the SEE countries in the context of a gravity model and found out that trade intensity in the region as well as trade ties with Europe is comparatively high. Furthermore, we looked at the stock markets of these countries and obtained evidence that integration with advanced stock markets is still relatively weak, but results indicate that integration has picked up lately. We included a descriptive analysis of foreign financial flows to the region based on BIS data. Results show that financial inflows and credit to the region has decreased considerably after the global economic crisis. This environment deteriorated even further with the financial stress in some SEE countries that have strong banking ties with troubled EZ member state banks. We also concluded that demographics is a challenge to watch out for in most SEE countries and necessary measures should be taken immediately.

All in all, our findings point to some short to long term vulnerabilities in the SEE economies, but they also suggest that these countries have a high potential for more trade and deeper financial integration with EU markets, as long as future policies are designed and implemented effectively. Hence, when setting up a strategy for the future, the EU integration process, in our view, should remain at the core for embedding the development process on firm grounds in the SEE countries.

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TABLES AND FIGURES

TABLE 1: MACROECONOMIC INDICATORS	Albania					Bulgaria					Bosnia Herzegovina				
	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011
Population (million)	3.2	3.2	3.2			7.7	7.6	7.6	7.6	7.5	3.8	3.8	3.8	3.8	
Real GDP Growth (%)	5.9	7.5	3.3	4.1	3.0e	6.4	6.2	-5.5	0.4	1.7	6.1	5.6	2.9	0.7	2.4e
Unemployment rate (%)	13.4	12.8	13.0	13.7	13.3	6.9	5.6	6.8	10.2	11.2	42.9	40.6	24.1	27.2	43.8
CPI (annual % change)	2.9	3.4	2.3	3.6	3.5	7.6	12.0	2.5	3.0	3.4	1.5	7.4	-0.4	2.1	3.7
Exports of goods and services (% of GDP)	28.1	29.2	28.9	32.4	33.5	59.5	58.2	47.5	57.4	66.5	37.2	36.8	32.1	37.7	40.0
Imports of goods and services (% of GDP)	54.6	55.7	53.2	52.9	55.9	79.2	78.7	56.3	59.3	65.8	68.6	69.6	55.2	58.9	63.4
Net Direct Investment (% of GDP)	6.1	7.5	8	9	7.9						13.4	5.3	1.4	1.1	2.3
Trade Balance (% of GDP)	-26.8	-27.3	-26.4	-23.1	-23.8	-19.72	-19.5	-8.7	-1.9	0.7	-37.1	-38.1	-27.7	-25.7	-27.5
Current account balance (% of GDP)	-10.5	-15.5	-15.2	-11.3	-12.2	-25.2	-23.09	-8.9	-1.3	1.0	-10.7	-14.0	-6.3	-5.7	-8.7
Int. Reserves (exc. gold, million euro)	1418	1639	2,666	1,825	1,852	11216	11928	11943	11612		3458	3230	3219	3330	3333
Budget Deficit/GDP (%)	-3.5	-5.5	-7.0	-3.1	3.5e	1.2	1.7	-4.3	-3.1		1.2	-2.2	-4.4	-2.5	-1.3e
Public Debt/GDP(Gross, %)	54.8	54.8	59.3	57.8	58.8	17.2	13.7	14.6	16.3		17.1	17.1	21.8	25.6	25.8
Credit Growth (Annual % change)	53.9	43.8	20.5	8.6	11.7		32.9	3.8	1.1	3.3	27.4	28.4	5.4	-0.9	5.6
Exchange rate (EUR, average)	123.6	122.8	132.1	137.8	140.1	1.96	1.96	1.96	1.96	1.96	1.94	1.94	1.94	1.93	1.93

	Montenegro					Kosovo					Serbia				
	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011
Population (million)	0.6	0.6	0.6	0.6	0.6	2.1	2.2	2.2	2.2		7.4	7.4	7.3	7.3	
Real GDP Growth (%)	10.7	6.9	-5.7	2.5	2.7f	6.3	6.9	2.9	3.9		5.4	3.8	-3.5	1.0	1.6
Unemployment rate (%)	11.9	10.7	11.4	12.2	11.6	43.6	47.5	45.4			18.1	13.6	16.1	20.0	22.2
CPI (annual % change)	4.3	7.4	3.4	0.5	3.1	4.4	9.4	-2.4	3.5	7.4	11.0	8.6	6.6	10.3	7.0
Exports of goods and services (% of GDP)	44.4	39.5	32	35		14.7	14.3	15.5	18.5		30.7	31.1	29.3	34.8	34.8
Imports of goods and services (% of GDP)	86.7	94	65	63		54.6	57.1	55.2	59.1		55.0	54.8	47.0	51.3	51.1
Net Direct Investment (% of GDP)	21.2	18.9	36	18	12.2	12.7	8.9	7	9		6.4	6.2	4.8	3.1	5.9
Trade Balance (% of GDP)	-57.6	-65.6	-44.3	-41.1	-40.9	-40.3	-43.3	-43	-42		-23.1	-25.5	-18.1	-17.0	-17.6
Current account balance (% of GDP)	-39.5	-50.6	-29.6	-24.7	-19.9	-10.4	-16.3	-15.4	-17.4		-16.1	-20.6	-7.4	-7.5	-9.5
Int. Reserves (exc. gold, million euro)	468	313	398	416	304.0	1058	1111	1199	1247	1235	9634	8162	10602	10002	12058
Budget Deficit/GDP (%)	6.2	-0.4	-5.7	-4.9	-4.0	7.1	-0.1	-0.7	-2.6	-1.8	-2.0	-2.6	-4.5	-4.6	-4.7
Public Debt/GDP(Gross, %)	27.5	29	38.2	40.9	45.3			6.5			29.4	25.6	31.3	37.0	
Credit Growth (Annual % change)	165.1	24.6	-14.3	-8.2	-11.1	29.7	38.7	17.4	10.1	15.4	32.5	34.2	24.4	29.9	7.4
Exchange rate (EUR, average)	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		78.8	89.5	95.9	105.9	106.9

TABLE 1: MACROECONOMIC INDICATORS (Cont'd)	Croatia					Macedonia					Romania				
	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011
Population (million)	4.4	4.4	4.4	4.4	4.4	2.0	2.0	2.1	2.1	2.1	21.6	21.5	21.5	21.4	21.4
Real GDP Growth (%)	5.1	2.2	-6	-1.2	0.0	6.2	5.1	-1.0	1.7	3.2	6.3	7.3	-6.6	-1.6	2.5
Unemployment rate (%)	9.6	8.4	9.1	11.8	13.5	34.9	33.8	32.2	32.0	31.4	6.4	5.8	6.9	7.3	7.4
CPI (annual % change)	2.9	6.1	2.4	1.0	2.3	2.3	8.3	-0.8	1.6	3.9	4.9	7.9	5.6	6.1	1.7
Exports of goods and services (% of GDP)	42.1	41.7	35.4	38.3	40.8	52.4	50.9	39.0	47.6	56.0	29.3	30.4	30.6	35.5	38.3
Imports of goods and services (% of GDP)	49.8	49.9	39.4	38.8	40.8	70.8	76.2	60.6	66.7	76.1	43.2	43.5	36.6	40.7	43.5
Net Direct Investment (% of GDP)	7.9	6.7	3.4	0.9		8.5	6.1	2.0	3.2	4.1					
Trade Balance (% of GDP)	-21.7	-22.6	-16.2	-13.0	-12.8f	-19.8	-26.2	-23.1	-21.3	-23	-13.9	-13.0	-6.0	-5.2	-5.1
Current account balance (% of GDP)	-7.2	-8.8	-5.0	-1.0	-1.2f	-7.1	-12.8	-6.7	-2.2	-2.8	-13.4	-11.6	-4.2	-4.4	-4.2
Int. Reserves (exc. gold, million euro)	9307.0	9121.0	10376	10660	11195	1551	1497	1599	1715	2302	25325	25977	28249	32606	
Budget Deficit/GDP (%)	-2.5	-1.4	-4.1	-4.9	-5.5	0.6	-1.0	-2.7	-2.5	-2.5f	-2.9	-5.7	-9	-6.9	
Public Debt/GDP(Gross, %)	32.9	28.9	35.3	41.2	45.8	27.3	28.8	32.1	35.1	29.0f	12.8	13.4	23.6	31	
Credit Growth (Annual % change)	19.4	11.6	5.0	2.9	6.5	35.0	40.3	14.2	5.4	8.1					
Exchange rate (EUR, average)	7.3	7.2	7.34	7.29	7.4	61.2	61.3	61.3	61.5	61.5	3.3	3.7	4.2	4.2	4.2

	Turkey					Slovenia					EU-27				
	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011
Population (million)	70.0	71.0	72.0	73.0	73.0	2.0	2.0	2.0	2.0	2.1	496	498	500	501	503
Real GDP Growth (%)	4.7	0.7	-4.8	9.2	8.5	6.9	3.6	-8	1.4	-0.2	3.2	0.3	-4.3	2.0	1.5
Unemployment rate (%)	9.9	11.0	14.1	12.0	9.8	4.9	4.4	5.9	7.3	8.1	7.2	7.1	9.0	9.7	9.7
CPI (annual % change)	8.8	10.4	6.3	8.6	6.5	3.8	5.5	0.9	2.1	2.1	2.3	3.7	1.0	2.1	3.1
Exports of goods and services (% of GDP)	22.3	23.9	23	21	24	69.6	67.1	58.4	65.4	72.3	39.5	41.1	35.8	39.8	42.3
Imports of goods and services (% of GDP)	27.5	28.3	24	27	33	71.3	70.4	57.0	64.9	71.3	40.1	41.3	36.7	40.6	43.4
Net Direct Investment (% of GDP)	3.1	2.3	1.1	1.0	1.7										
Trade Balance (% of GDP)	-7.2	-7.1	-4	-8	-12	-1.7	-3.2	1.4	0.6	1.0	-0.5	-0.2	-1.0	-0.8	-1.1
Current account balance (% of GDP)	-5.9	-5.5	-2	-6	-10	-4.8	-6.9	-1.3	-0.8						
Int. Reserves (exc. gold, million euro)	76.3	86.5	77	83	84	666	623	671	695	642					
Budget Deficit/GDP (%)	-1.0	-2.2	-6	-4	-1.4f	0.0	-1.9	-6.1	-5.8		-0.9	-2.4	-6.9	-6.6	
Public Debt/GDP(Gross, %)	39.4	39.5	46	42	39.7f	23.1	21.9	35.3	38.8		59.0	62.5	74.7	80.1	
Credit Growth (Annual % change)	33.2	22.4	4	34	24										
Exchange rate (EUR, average)	1.78	1.91	2.16	2.00	2.33										

* European Commission, Eurostat, World Bank, National Central Banks

Table 2: Revealed Functioning of the SEE Countries

		SEE	EZ	EU	EUROPE	ASIAN TIGERS	REST OF WORLD
1	SEE	0.86	0.53	0.48	0.38	0.46	0.19
2	EURO AREA	0.53	0.68	0.71	0.54	0.73	0.48
3	EU	0.48	0.71	0.93	0.65	0.74	0.38
4	EUROPE	0.38	0.54	0.65	0.33	0.60	0.36
5	ASIAN TIGERS	0.46	0.73	0.74	0.60	0.91	0.65
6	Rest of World	0.19	0.48	0.38	0.36	0.65	0.31

Notes The composition of country groups is as follows:

SEE: Bosnia and Herzegovina, Bulgaria, Croatia, Macedonia, Romania, Slovenia;

Eurozone: Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Slovak Republic, Spain;

EU: Czech Republic, Denmark, Hungary, Latvia, Lithuania, Poland, Sweden, United Kingdom;

Europe: Belarus, Iceland, Norway, Switzerland, Turkey, Ukraine;

Asian Tigers: Cambodia, China, Hong Kong SAR, China, India, Indonesia, Korea, Malaysia, Thailand, Vietnam;

Rest of World: Algeria, Angola, Argentina, Australia, Azerbaijan, Bahamas, Bahrain, Bangladesh, Bolivia, Botswana, Brazil, Brunei Darussalam, Cameroon, Canada, Chile, Colombia, Congo, Dem. Rep., Costa Rica, Cote d'Ivoire, Dominican Republic, Ecuador, Egypt, El Salvador, Ethiopia, French Polynesia, Gabon, Georgia, Ghana, Greece, Guatemala, Guinea, Haiti, Honduras, Iran, Iraq, Israel, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Kuwait, Lebanon, Libya, Macao SAR China, Madagascar, Mauritius, Mexico, Morocco, Mozambique, Namibia, Nepal, New Caledonia, New Zealand, Nicaragua, Nigeria, Oman, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Qatar, Russian Federation, Saudi Arabia, Senegal, Serbia, Singapore, South Africa, Sri Lanka, Sudan, Syria, Tanzania, Trinidad and Tobago, Tunisia, Uganda, United Arab Emirates, United States, Uruguay, Uzbekistan, Venezuela, West Bank and Gaza, Yemen, Rep., Zambia, Zimbabwe.

Figure 1: Estimated Conditional Correlations
of Turkey, Croatia, and Romania vis-à-vis Germany and USA
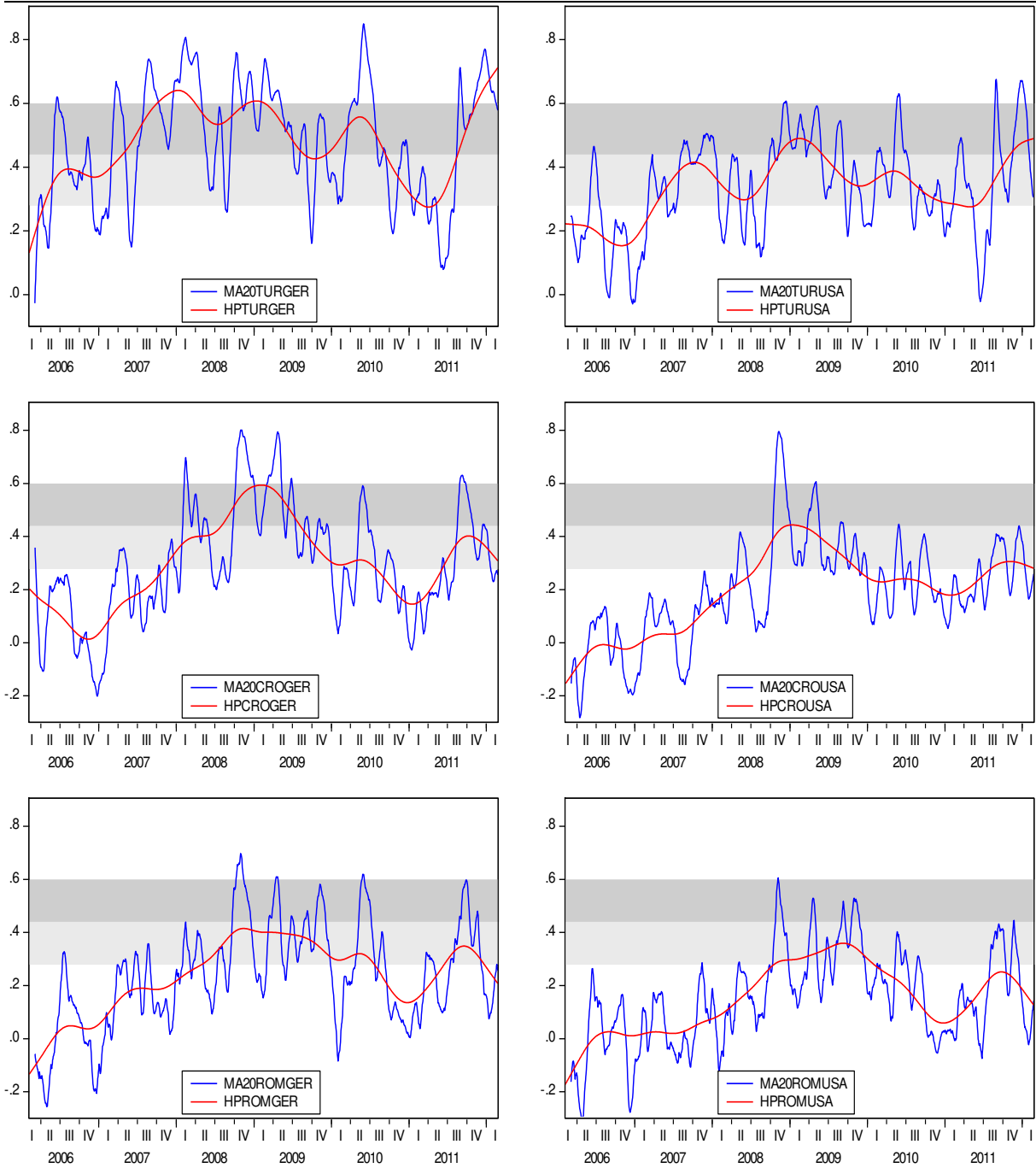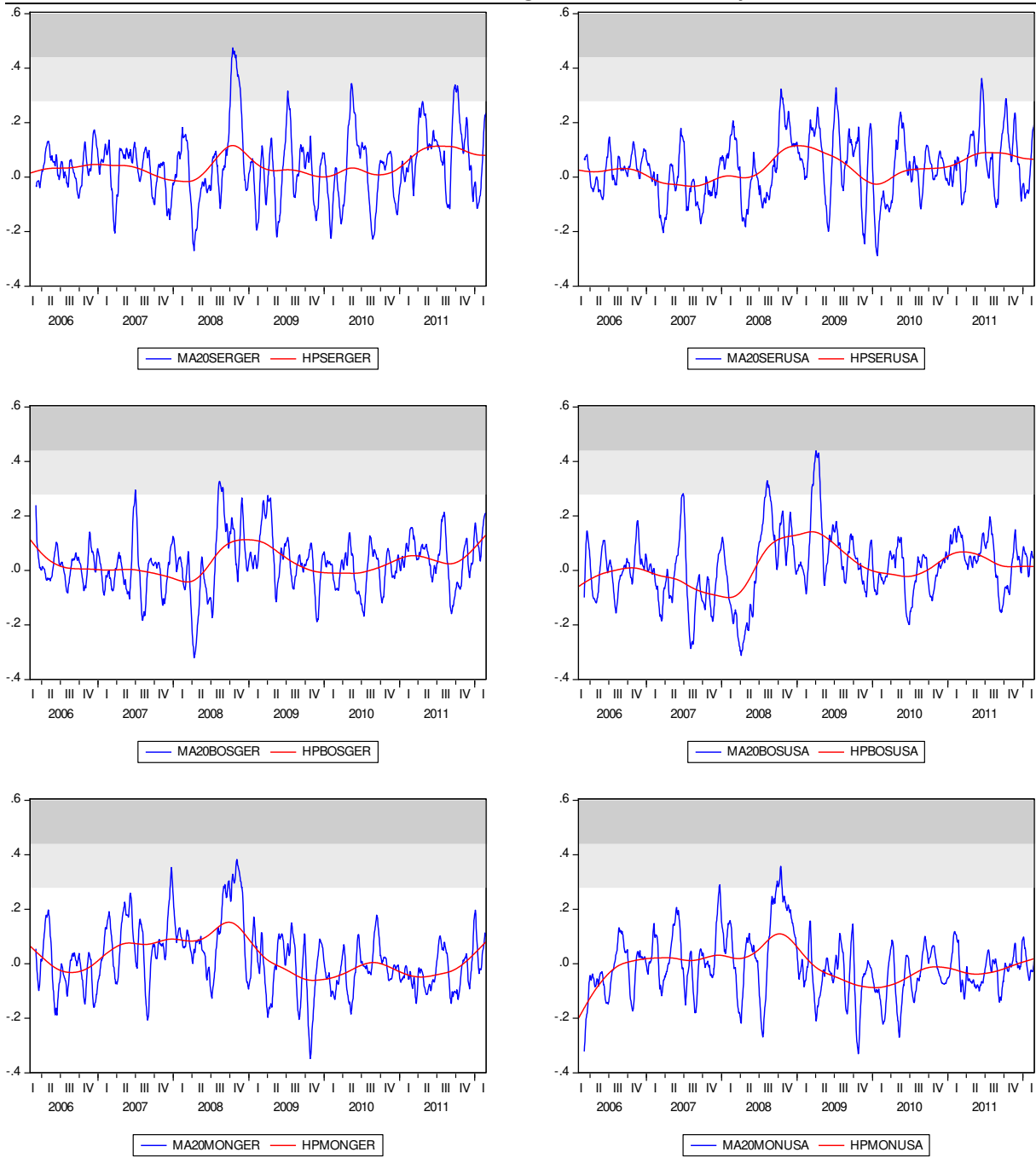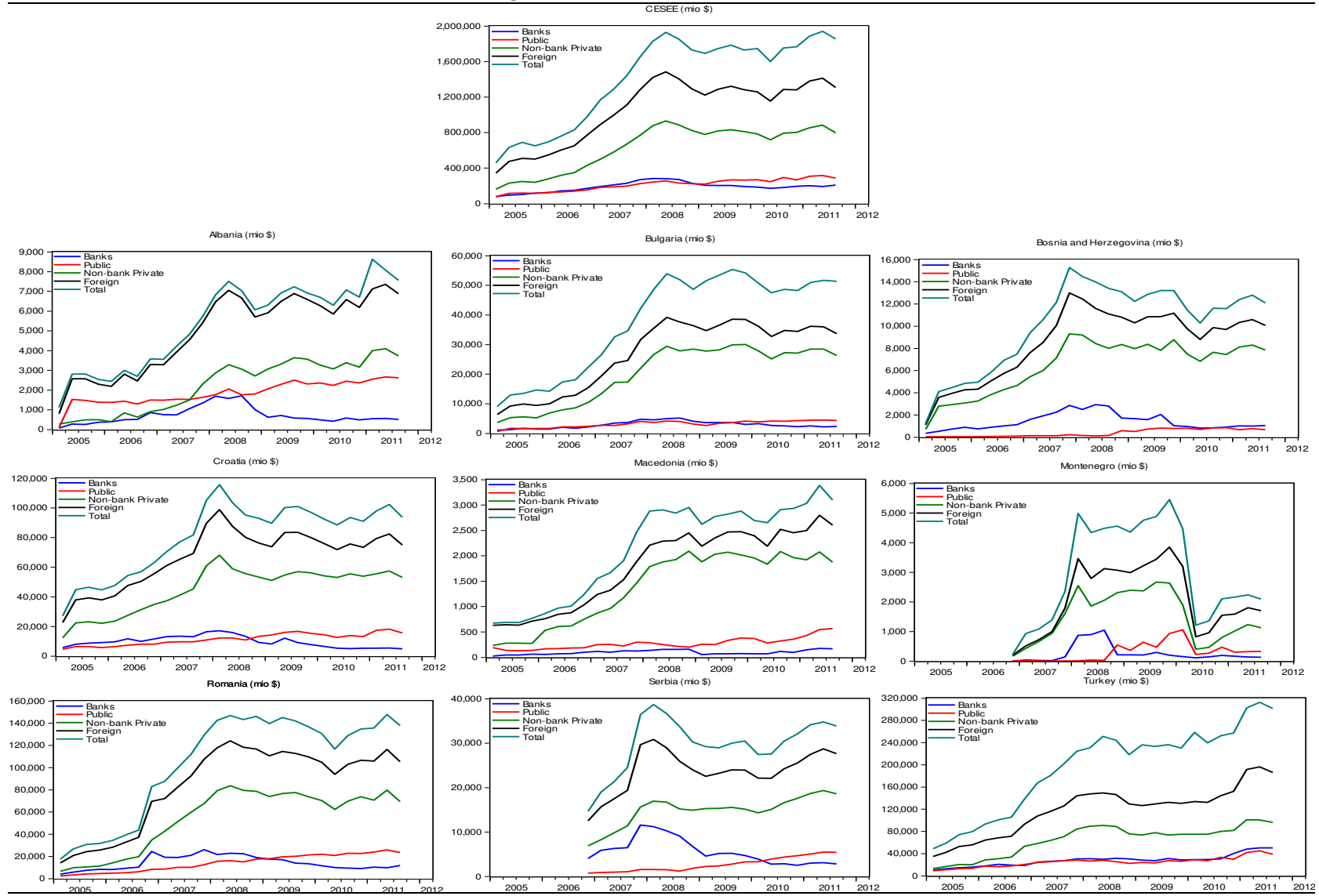

Notes: Shaded areas represent 1 and 2 standard deviations from the average integration level between Germany and US equity markets.

Figure 1: Estimated Conditional Correlations (Cont'd) of Bulgaria, Macedonia and Slovenia vis-à-vis Germany and USA
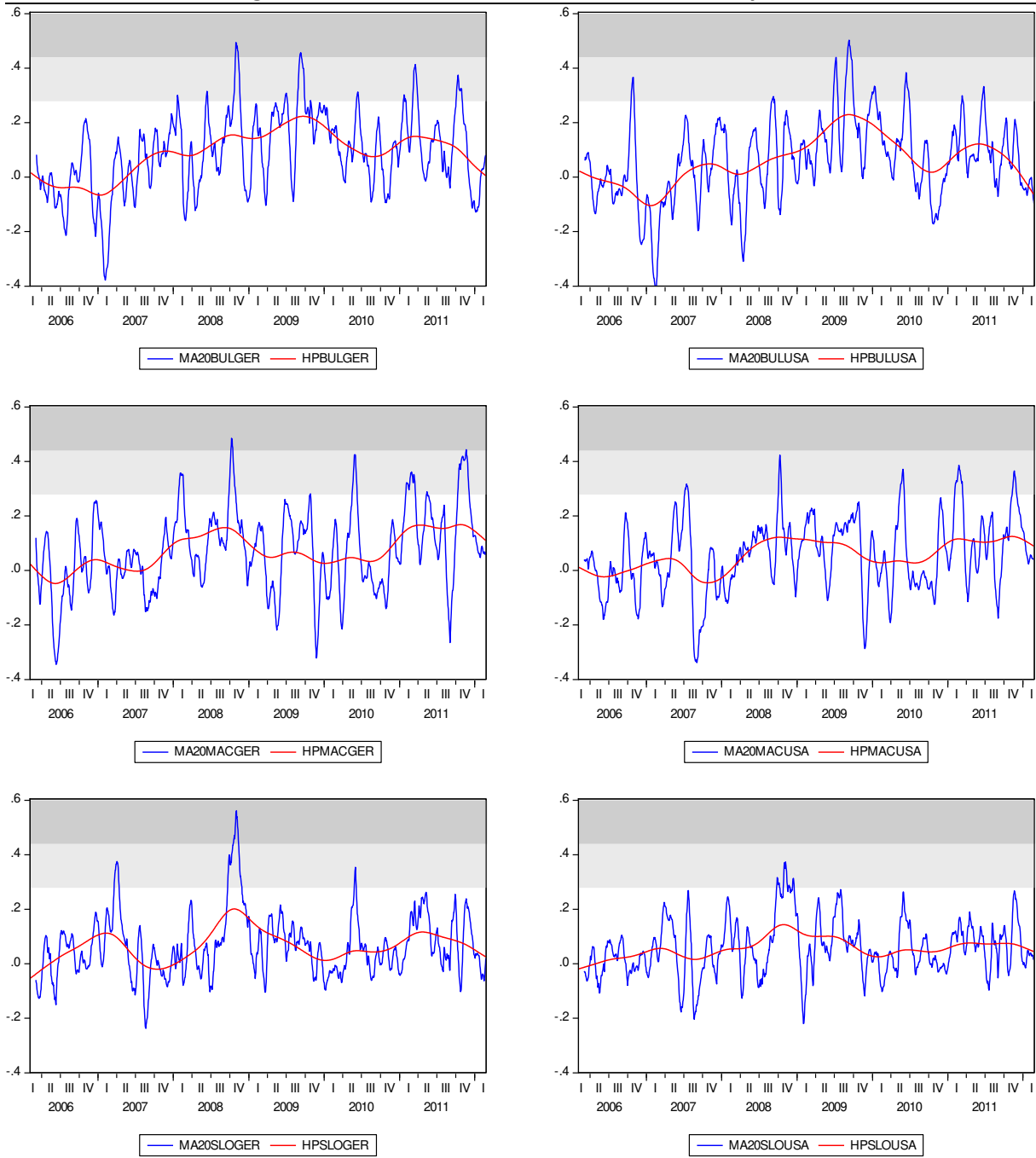
Notes: Shaded areas represent 1 and 2 standard deviations from the average integration level between Germany and US equity markets.

**Figure 1: Estimated Conditional Correlations (Cont'd)
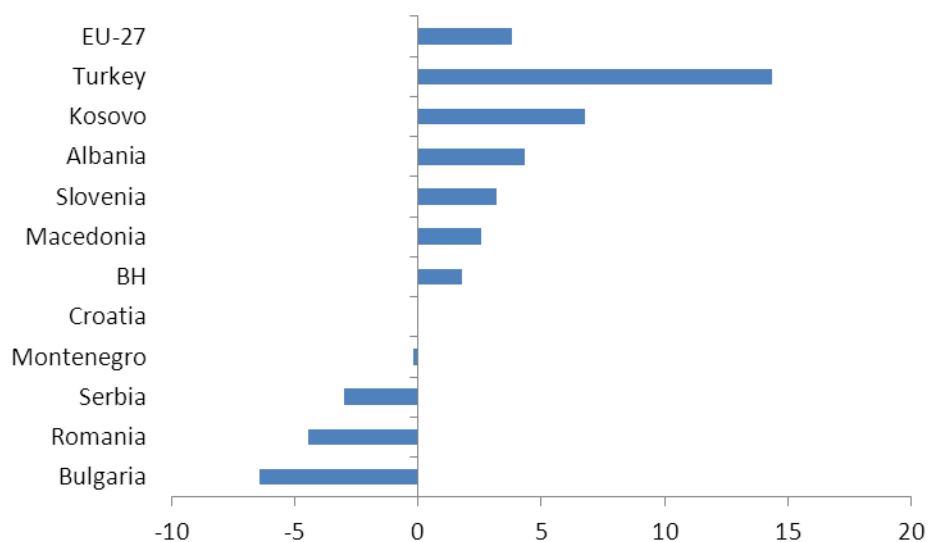of Serbia, Bosnia and Montenegro vis-à-vis Germany and USA**

Notes: Shaded areas represent 1 and 2 standard deviations from the average integration level between Germany and US equity markets.
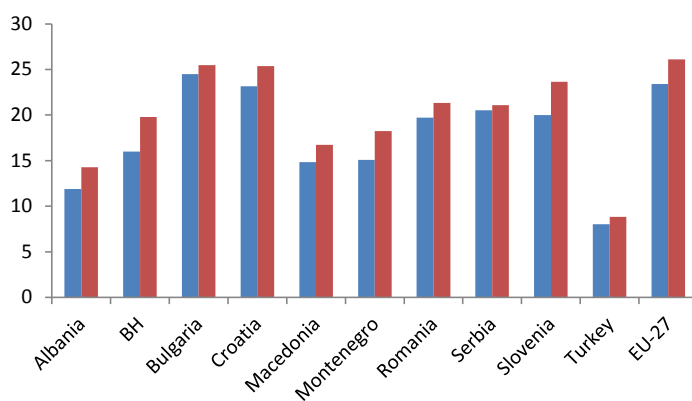
Figure 2 : Evolution of Claims in SEE

CESEE (mio $)

Albania (mio $)

Bulgaria (mio $)

Bosnia and Herzegovina (mio $)

Croatia (mio $)

Macedonia (mio $)

Montenegro (mio $)

Romania (mio $)

Serbia (mio $)

Turkey (mio $)

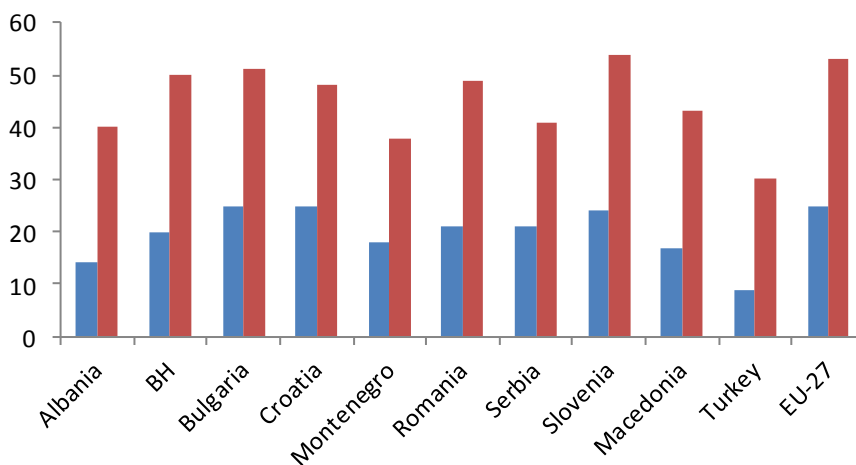**Figure 3: Population % Change (2000 – 2010)**

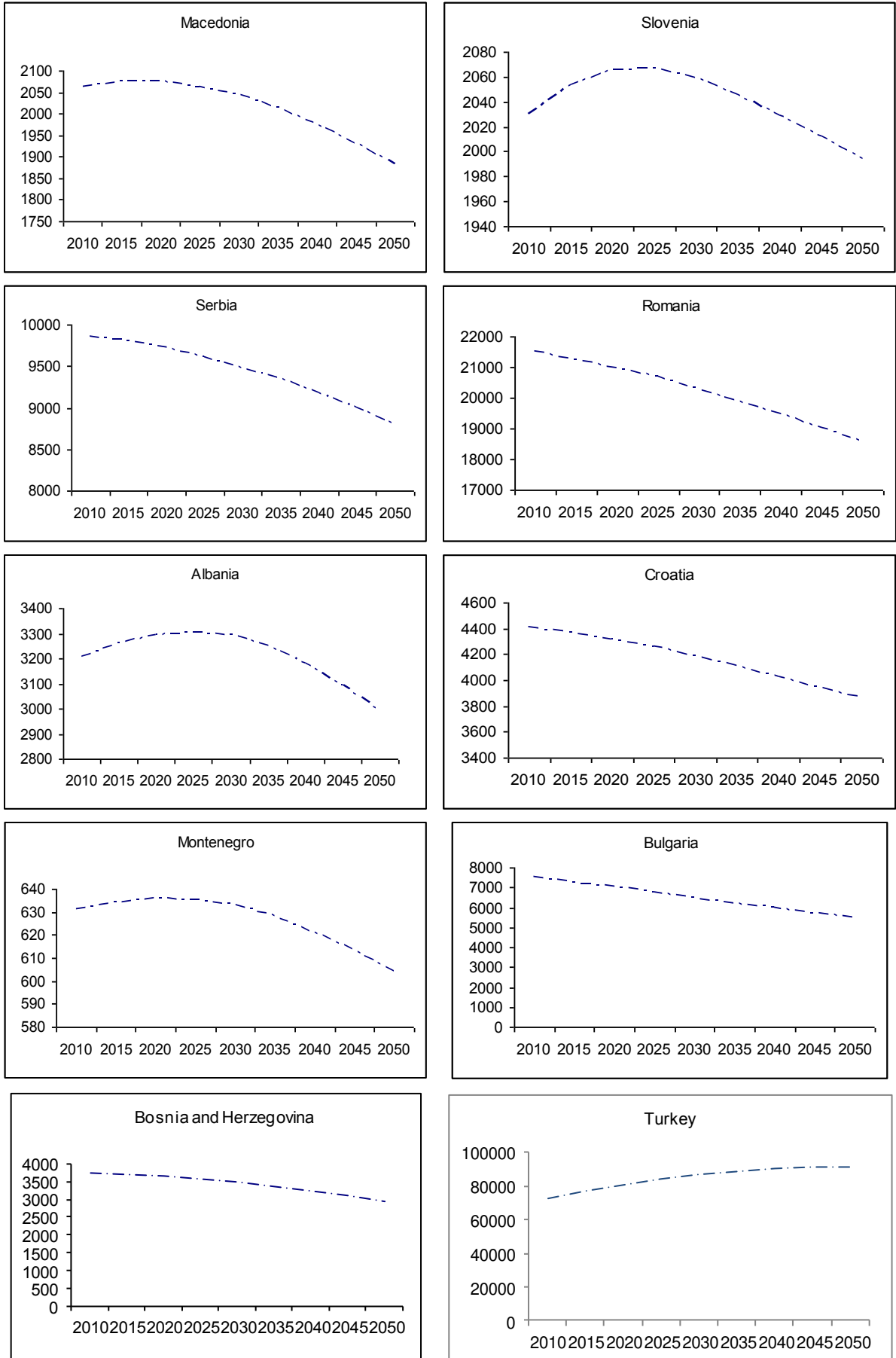**Figure 4: Old Age Dependency Ratio (2000 – 2010)**

Notes: Old age dependency ratio is defined as the ratio of population aged above 65 to the working population.

Figure 5: Old Age Dependency Projections (2010-2050)

Figure 6: Population Projections (2010 – 2050)

Table 3. Doing Business in the SEE Economies

	Rank		
	2012	**2011**	**2010**
Macedonia*	22	34	36
Slovenia	37	37	43
Montenegro*	56	56	65
Bulgaria*	59	57	51
Romania*	72	65	54
Croatia*	80	79	89
Albania	82	77	81
Serbia	92	88	90
Kosovo	117	117	118
Bosnia and Herzegovina	125	127	110
SEE Average	**74.2**	**73.7**	**73.7**
Memo items			
OECD High Income	*30*	*30*	
Eastern Europe and Central Asia	*77*	*72*	
East Asia and pacific	*87*	*87*	
Latin America and Caribbean	*91*	*96*	
Middle East and North Africa			
South Asia	*117*	*117*	
Sub-Saharan Africa	*137*	*137*	
Turkey	*71*	*73*	

Notes As reported in the Doing Business – 2011, Croatia ranked 2nd and Montenegro ranked 7th in the list of the most improved in starting a business; Croatia ranked 4th and Romania ranked 8th in the list of the most improved in dealing with construction permits; Macedonia ranked 5th and Bulgaria ranked 6th in the list of the most improved in paying taxes; Montenegro ranked 4th in the list of the most improved in trading across borders and Serbia ranked 2nd in the list of the most improved in closing a business.

Appendix: Data Sources and Transformations

Gravity Analysis (Section 2)

The gravity data set is composed of:

Trade flows: Export (f.o.b.) data are taken from UN COMTRADE, United Nations Commodity Trade Statistics Database. Each export flow was transformed into real terms by means of appropriate deflators. For each country pair, the trade volume (gravitational force) was calculated as the sum of reciprocal real exports.

Real income and income per capita: Real GDP and the real per capita GDP data are taken from WDI, World Development Indicators, International Bank of Reconstruction and Development (World Bank). For each country pair, a common measure of income (physical mass in product form) was calculated as the product of each country's income. The same applies to the per capita income.

Distances: Geographical distance data are taken from CEPII, natural logarithms.

Conditional Volatility Analysis – GARCH (Section 3)

Stock market indices employed in the study are:

Bosnia: SASE Free10 Index, **Bulgaria**: SOFIX Index, **Croatia**: CROBEX Index, **Germany**: DAX Index, **Greece**: FTSE/ASE 20 Index, **Macedonia**: MBI 10 Index, **Montenegro**: MONEX20 Index, **Romania**: BET Index, **Serbia**: BELEXLIN Index, **Slovenia**: SBITOP Index, **Turkey**: ISE100 Index, **USA**: S&P 500 Index.

The mean equation for trivariate GARCH could be specified as follows:

$$R_t = \alpha + \sum_{i=0}^{n}\beta_i R_{t-i} + \lambda X_t + \varepsilon_t \tag{1}$$

Here R_t is a 3x1 vector of stock market returns at time t, X_t is the exogenous variable and ε_t is a residual vector. The parameters of the mean return equation comprise the constant terms, the parameters of the autoregressive terms (if available), and the coefficient for the exogenous variable (only for DAX returns).

In the multivariate GARCH(1,1) representation proposed by Engle and Kroner (1995), the residual ε_t is normally distributed, $\varepsilon_t|\Im_{t-1}\sim N(0,H_t)$. The parameterization for H_t, as a function of the information set $\Im_{t-1}$ chosen here allows each element of H, to depend on q (q=1 in our model) lagged values of the squares and cross-products of ε_t, as well as p (p=1 in our model) lagged values of the elements of H. So the elements of the covariance matrix follow a vector ARMA process in squares and cross-products of the residuals.

To illustrate the BEKK model, we use the GARCH (1,1) model as used in this study:

$$H_t = C_0' C_0 + A' \varepsilon_t \varepsilon_t' A + G' H_{t-1} G \tag{2}$$

Here C_0 is a n x 1 parameter vector, and A and G, are n x n parameter matrices. In a tri-variate diagonal BEKK representation, equation 2 can be written as follows:

$$H_t = \begin{bmatrix} h_{11,t} \\ h_{12,t} \\ h_{13,t} \\ h_{22,t} \\ h_{23,t} \\ h_{33,t} \end{bmatrix} = \begin{bmatrix} c_{01} \\ c_{02} \\ c_{03} \\ c_{04} \\ c_{05} \\ c_{06} \end{bmatrix} + \begin{bmatrix} a_{11} & 0 & 0 & 0 & 0 & 0 \\ 0 & a_{22} & 0 & 0 & 0 & 0 \\ 0 & 0 & a_{33} & 0 & 0 & 0 \\ 0 & 0 & 0 & a_{44} & 0 & 0 \\ 0 & 0 & 0 & 0 & a_{55} & 0 \\ 0 & 0 & 0 & 0 & 0 & a_{66} \end{bmatrix} \begin{bmatrix} \varepsilon_{1,t-1}^2 \\ \varepsilon_{1,t-1}\varepsilon_{2,t-1} \\ \varepsilon_{1,t-1}\varepsilon_{3,t-1} \\ \varepsilon_{2,t-1}^2 \\ \varepsilon_{2,t-1}\varepsilon_{3,t-1} \\ \varepsilon_{3,t-1}^2 \end{bmatrix} + \begin{bmatrix} g_{11} & 0 & 0 & 0 & 0 & 0 \\ 0 & g_{22} & 0 & 0 & 0 & 0 \\ 0 & 0 & g_{33} & 0 & 0 & 0 \\ 0 & 0 & 0 & g_{44} & 0 & 0 \\ 0 & 0 & 0 & 0 & g_{55} & 0 \\ 0 & 0 & 0 & 0 & 0 & g_{66} \end{bmatrix} \begin{bmatrix} h_{11,t-1} \\ h_{12,t-1} \\ h_{13,t-1} \\ h_{22,t-1} \\ h_{23,t-1} \\ h_{33,t-1} \end{bmatrix} \quad (4)$$

Writing the equations as a system and renaming some coefficients to make them more intuitive, we obtain:

$$h_{11,t} = c_{11} + a_{11}\varepsilon_{1,t-1}^2 + g_{11}h_{11,t-1} \tag{5}$$

$$h_{12,t} = c_{12} + a_{12}\varepsilon_{1,t-1}\varepsilon_{2,t-1} + g_{12}h_{12,t-1} \tag{6}$$

$$h_{13,t} = c_{13} + a_{13}\varepsilon_{1,t-1}\varepsilon_{3,t-1} + g_{13}h_{13,t-1} \tag{7}$$

$$h_{22,t} = c_{22} + a_{22}\varepsilon_{2,t-1}^2 + g_{22}h_{22,t-1} \tag{8}$$

$$h_{23,t} = c_{23} + a_{23}\varepsilon_{2,t-1}\varepsilon_{3,t-1} + g_{23}h_{23,t-1} \tag{9}$$

$$h_{33,t} = c_{33} + a_{33}\varepsilon_{3,t-1}^2 + g_{33}h_{33,t-1} \tag{10}$$

This system can be estimated with a maximum likelihood estimator.

Model representation for each country was specified in line with the optimal lag structure suggested by Schwarz Information Criterion. Country lag orders are as follows: **Bosnia**: 2, **Bulgaria**: 4, **Croatia**: 3, **Germany**: 0, **Greece**: 0, **Macedonia**: 2, **Montenegro**: 2, **Romania**: 1, **Serbia**: 1, **Slovenia**: 2, **Turkey**: 0, **USA**: 2.