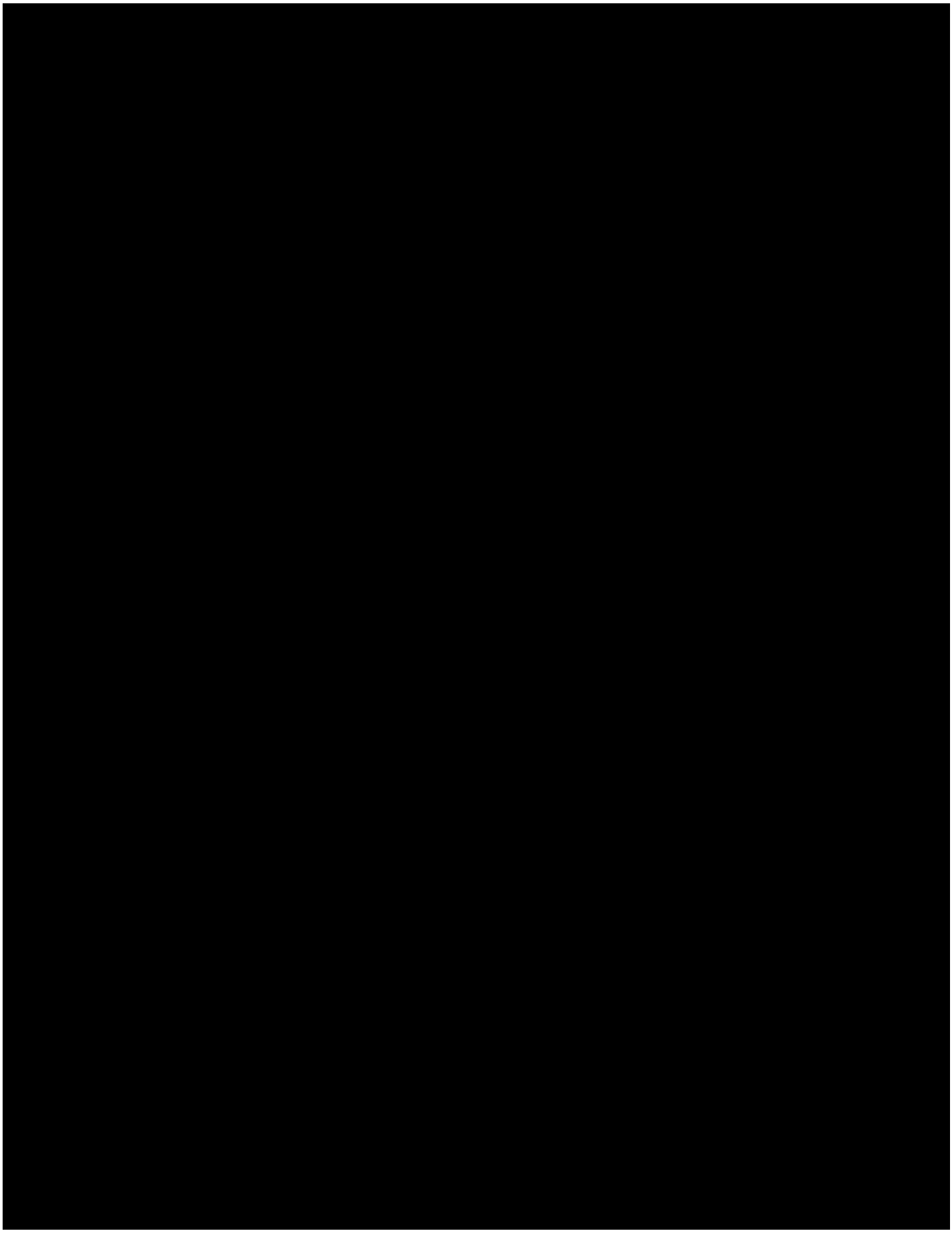

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Late to the game? Capital flows to the Western Balkans

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Abstract

The boom and bust in capital flows to the New Member States of the European Union have received a considerable amount of attention; foreign direct investment and bank flows to the region and countries' participation in regional supply chains have been well-documented. Relatively little has, however, been written about capital flows to the Western Balkans economies, which are often perceived to be 'late arrivals' to large capital flows. This paper aims to examine how capital flows to the Western Balkans compare with flows to the New Member States, in terms of levels as well as dynamics. We find that while financial integration took off somewhat later in the Western Balkans than in the New Member States, it has increased rapidly, despite still much lower capital account openness. Capital inflows as a share of GDP are comparable to those observed in the New Member States, (perhaps surprisingly) diverse in terms of source countries and broadly similar in composition, though with equity shares higher than they were in the New Member States at comparable levels of GDP per capita.

JEL Classification Numbers: F32, F41, O57, P27

Keywords: Capital flows, foreign direct investment, Western Balkans

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I. INTRODUCTION[1]

The past 25 years have witnessed dramatic changes in Eastern Europe. In the late 1990s and especially the early 2000s private capital inflows to the later New Member States increased rapidly, driven by overall capital scarcity, relatively high initial levels of human capital, and the institutional anchor of potential EU membership. While these flows increased investment and employment, and provided financing for external current account imbalances, they also increased the countries' exposure to external shocks. The global financial crisis triggered a sharp drop in capital flows, raising important questions about the vulnerability of these economies—a slowdown in capital flows could have important spill-over effects on the real economy, through financial channels (on account of cross-border bank flows) or employment (in particular related to foreign direct investment)—and about how policy can respond most effectively.

The boom and bust in capital flows to the New Member States have received a considerable amount of attention; foreign direct investment (FDI) and bank flows to the region and countries' participation in regional supply chains have been well-documented. Relatively little has, however, been written about capital flows to the Western Balkans. While sharing many of the characteristics of the New Member States, transition in the Western Balkans has lagged behind that in the New Member States, as reflected for instance in a still relatively less developed private sector, and correspondingly high unemployment rates. The Western Balkans economies are also often perceived to be less open 'late arrivals' to large capital flows.

This paper aims to examine how capital flows to the Western Balkans compare with flows to the New Member States, in terms of levels as well as dynamics. Have the Western Balkans indeed opened up later, and does this still translate into lower capital inflows than to the New Member States? How do they measure up to the New Member States at comparable levels of development? Do capital flows in the Western Balkans respond to the same factors as in the New Member States? Have the Western Balkans missed out on rapid capital inflows as a driver of growth, or has their 'late arrival' resulted in a less pronounced boom-bust cycle?

The paper is structured as follows: section 2 provides a brief overview of the large literature on capital flows, focusing on the Western Balkans and the New Member States. Section 3 discusses the data used, and section 4 provides descriptive evidence on the

[1] Throughout the paper 'Western Balkans' refers to Albania, Bosnia and Herzegovina, Croatia, FYR of Macedonia, Montenegro, and Serbia. 'Central and Eastern Europe' includes the Czech Republic, Hungary, Poland, Slovakia and Slovenia; 'South Eastern Europe' includes Bulgaria and Romania. 'Central and South Eastern Europe' refers to these seven countries jointly. 'New Member States' also includes Estonia, Latvia and Lithuania. 'Emerging Europe' includes the New Member States and the Western Balkans economies.

evolution of stocks as well as flows. Section 5 outlines the empirical methodology used to examine the drivers of capital flows and presents results; section 6 concludes.

II. LITERATURE REVIEW

An extensive empirical literature has sought to explain the determinants of cross-border capital flows, focusing on gross inflows or net flows. GDP growth rate differentials and global risk aversion have typically emerged as the most robust statistically significant determinants of aggregate capital flows to emerging market economies (see e.g. Ahmed and Zlate 2013; Nier, Sedik, and Mondino 2014; Koepke 2015, and IMF 2016a).

Numerous studies have examined the experience of Central and Eastern Europe during the early years of transition. Early work by Lankes and others (1999) and Claessens and others (2000) noted a dramatic increase in private capital flows (especially FDI and portfolio equity investment) in the first decade of transition. Árvai (2005) and von Hagen and Siedschlag (2010) examined the effects of capital account liberalization. Lane and Milesi-Ferretti (2006) analyzed the evolution of net external asset positions and highlighted the large accumulation of net external liabilities, with FDI flows especially prominent in financing external current account imbalances.

The boom-bust cycle of the New Member States has also received a considerable amount of attention. Bakker and Gulde (2010) argued that the credit boom-bust cycle was to a large extent the result of factors external to the region as rapid credit growth followed from high liquidity in global markets and the attractiveness of 'new Europe' for capital flows, but that policies and policy failures (in particular overly expansionary macroeconomic settings and excessively optimistic views on prudential risks) also played a critical role. Jevčák and others (2010) also found that external factors (such as Euro area macroeconomic and financial conditions and risk aversion) played a role in explaining foreign capital flows, but that the responsiveness of capital flows to global factors varied across recipient countries. Globan (2015) argued that macroeconomic factors in the Eurozone were becoming increasingly dominant determinants, especially after EU accession, and that the rising importance of push factors was also connected with the higher volatility of capital inflows, making host countries more prone to sudden stop episodes. Mitra (2011) looked at data on the sectoral composition of inflows to the New Member States and found that capital flows into real estate had a greater impact on swings in GDP than other sectors, irrespective of a country's exchange rate or fiscal policy.

Few papers focused explicitly on capital flows to the Western Balkans. A recent book by Murgasova and others (2015) reviewed macroeconomic developments in the Western Balkans over the past 15 years, including external balances and capital inflows, and highlighted increasing (mainly FDI) inflows in the boom years, and their relative stability in the post-crisis period—in contrast with the experience of the New Member States, which saw declining and eventually negative capital inflows. Ganić (2013) examined the increased

integration of the Western Balkans in global economic flows and highlighted the importance of geographic factors, and the corresponding prominent role of the EU as a source of (especially FDI) flows to the region. Gabrisch (2015) used Granger causality tests to examine linkages between changes in the real exchange rate and net capital inflows to the Western Balkans and found that changes in net capital flows preceded changes in relative unit labor costs. Kovtun and others (2014) looked at the employment impact of capital inflows and highlighted that while in the New Member States the infusion of capital from abroad (especially via greenfield FDI) played a key role in developing new businesses or even new sectors and provided a chance for workers dismissed from the declining areas to be reabsorbed by new economic activities, delayed transition and low FDI put the Western Balkans at a disadvantage in diversifying away from traditional sectors.

The aim of this paper is to build on this literature, while providing value added by integrating the analysis of flows as well as stock positions and relying on a more comparative analysis relative to the New Member States, and extending the analysis to the roles of common and country-specific factors, in the boom years as well as in the aftermath. To the best of our knowledge, this is the first paper to examine these questions for the Western Balkans in this framework.

III. DATA

The following analysis relies on quarterly data on capital flows from the Financial Flows Analytics database and annual data on stocks from the External Wealth of Nations database. The sample covers the Western Balkans, as well as the New Member States and the EU15 for comparison, over the period 1995–2014.[2]

In all of the following *capital inflows* are defined as net acquisition of domestic assets by nonresidents; *capital outflows* are defined as net acquisition of foreign assets by residents, *excluding* reserve assets; *net capital inflows* are defined as the difference between capital inflows and outflows. Net capital inflows and changes in reserve assets together constitute the financial account balance, as defined in the IMF *Balance of Payments Manual*. Total gross inflows and outflows exclude derivatives flows; equity flows refer to the sum of foreign direct investment (FDI) and portfolio equity; debt flows refer to the sum of portfolio debt and other flows. All flows are measured as shares of GDP.

In the panel regressions country-specific forecasted growth and interest rate differentials are measured as the difference between the country's own rate and a simple average of EU14 (or NMS or WB) rates. Real interest rates are based on policy rates, deflated using one-year ahead *World Economic Outlook* inflation forecasts. Institutional quality is measured using the World Governance Indicators rule of law measure. Capital

[2] Some of the analysis focuses on the EU14, excluding Luxembourg as a financial centre.

account openness is measured using the Chinn and Ito (2006) index. A large IMF-supported adjustment program is defined as growing IMF borrowing above 100 percent of the respective country quota. Fixed and floating exchange rates are defined using the IMF's *Annual Report on Exchange Arrangements and Exchange Restrictions* (AREAER) classification. Regional growth differentials are defined using simple averages of Western Balkans (or NMS) and EU14 growth rates. Global risk aversion is measured using the logarithm of the VXO. The change in the oil price refers to the year-on-year change in the West Texas Intermediate oil price.

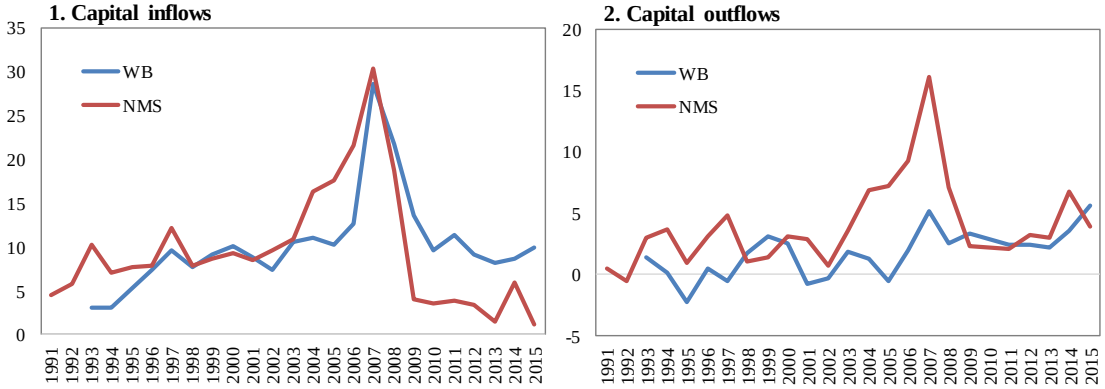
IV. DESCRIPTIVES

While, as noted earlier, the evolution of the external positions of the New Member States has been well-documented, relatively little has been written on the Western Balkans, especially since the crisis. Before turning to an analysis of the determinants of capital flows, this section thus aims to provide an overview of the evolution of the flows and correspondingly external stock positions of the Western Balkans economies over the past two decades, taking stock of where the region is now, in particular in comparison to the New Member States and the EU15.

As noted in the existing literature, capital flows to the Western Balkans arrived somewhat later than to the New Member States. Their experience during the boom years of 2003–07, however, (followed a perhaps surprisingly) similar trend (Figure 1, panel 1).[3] Capital inflows as a share of GDP increased from about 10 percent in 2003 to around 35 percent at their peak in 2007 in both the Western Balkans and in Central, Eastern and Southeastern Europe (the Baltics saw an increase from about 15 percent to 40 percent of GDP). In some cases, geographical proximity (Box 1) and relatively cheap labor allowed these economies to become part of an integrated cross-border production chain (see Murgasova and others 2015). This does, however, mask heterogeneity within the region: Montenegro constitutes an outlier in much of the following analysis, characterized by much larger (in particular real estate related) flows than the other economies in the region (capital inflows there peaked at 84 percent of GDP in 2007).

[3] Regional averages in Figures 1-4 are computed as simple averages of capital flows to GDP across countries. Alternatively, they could have been computed as total flows as a share of total GDP. Given the very different sizes of Western Balkans economies both carry problems: in the first case due to the disproportionate influence of Montenegro and Kosovo, while in the second Croatia and Serbia would dominate the charts. As the aim here is to reflect diversity across the region, countries are given equal weight.

Figure 1. Capital inflows and outflows in the Western Balkans and the New Member States
(Percent of GDP)

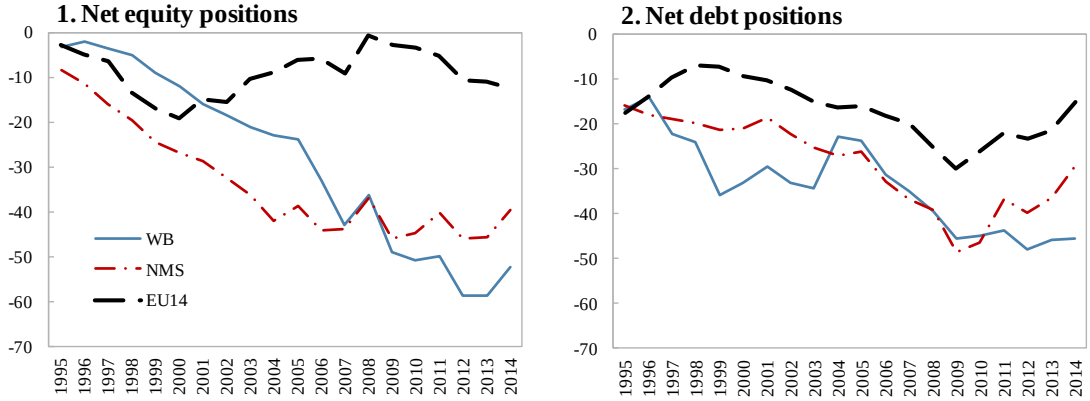


Sources: Financial Flow Analytics database.

Gross capital outflows on the other hand played only a relatively minor role in the Western Balkans (Figure 1, panel 2) and were mostly characterized by volatility, with no clear patterns over time. This was qualitatively similar to the experience of Southeastern Europe, whereas Central and Eastern Europe and the Baltics saw increasing inflows in the boom accompanied by increasing outflows—in line with the positive correlation between inflows and outflows documented by Broner and others (2013).

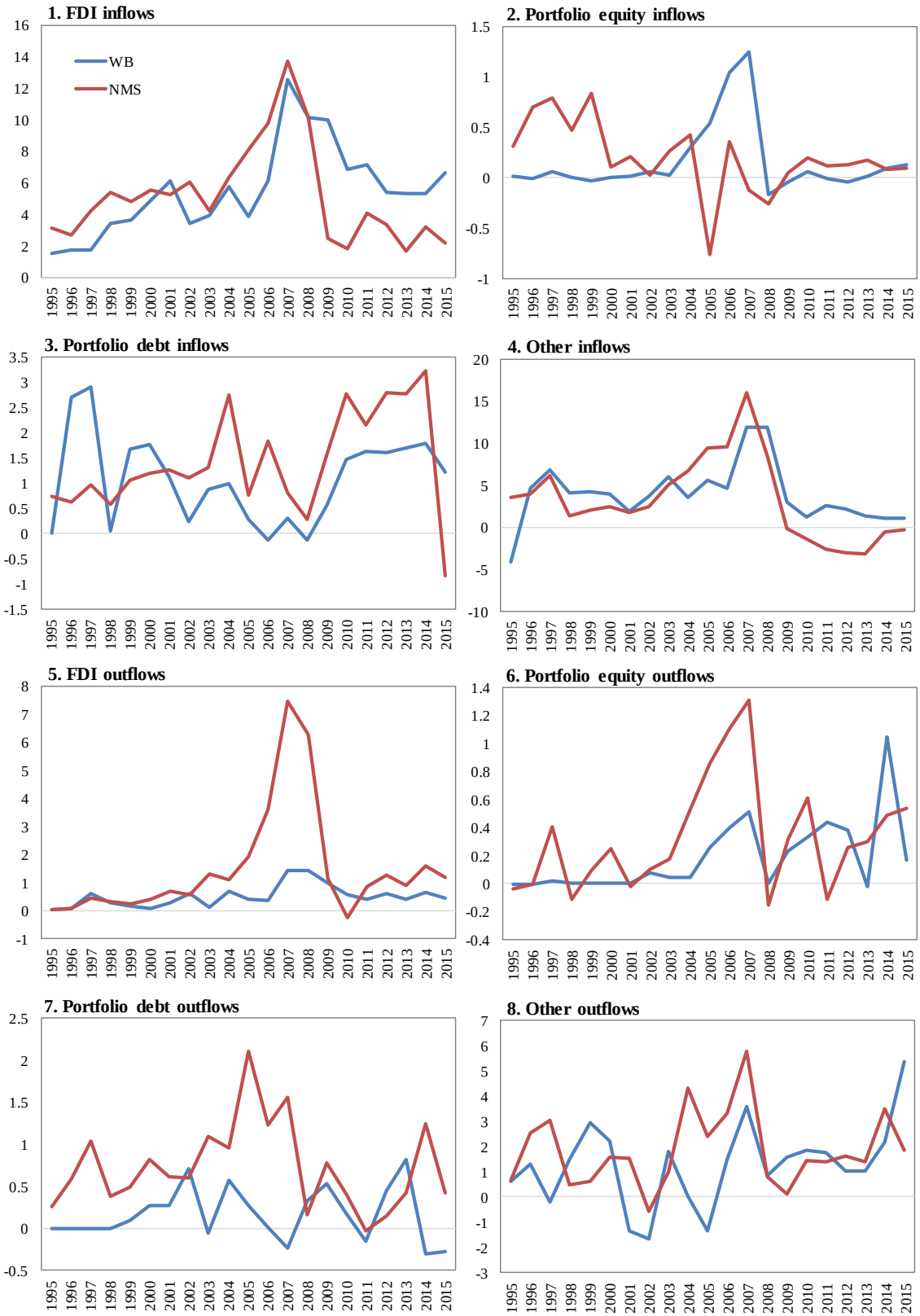
Booming capital inflows translated into the accumulation of large net external liabilities, in the Western Balkans as in the New Member States (Figure 2). Both net equity and net debt positions worsened, and while in the 1990s equity shares in the Western Balkans were even smaller than in the New Member States, by 2007 both net equity and net debt positions were comparable to those of the New Member States. Financial integration (measured as the sum of external assets and liabilities as a share of GDP) increased, though remains below levels observed in the New Member States (Annex Figure 1).

Figure 2. Net equity and debt positions
(Percent of GDP)



Sources: External Wealth of Nations database.
Note: Net equity (debt) positions refer to equity (debt) assets minus equity (debt) liabilities.

Figure 3. Capital inflows and outflows in the Western Balkans and the New Member States, by type of flow
(Percent of GDP)

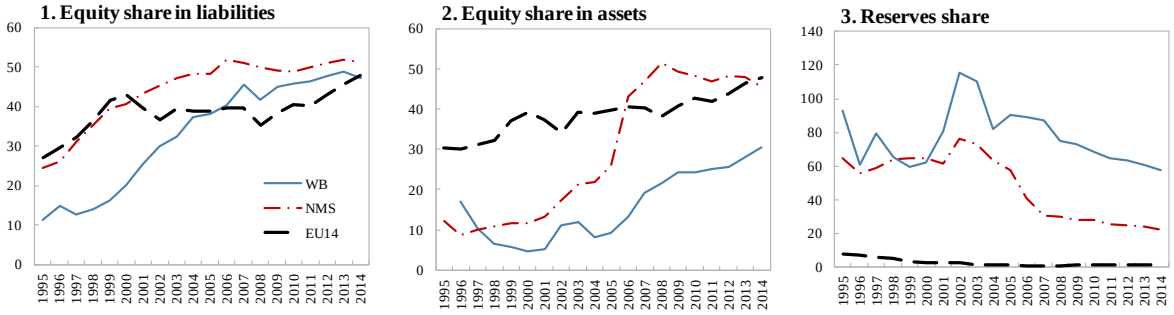


Sources: Financial Flow Analytics database.

Capital inflows to the Western Balkans consisted primarily of FDI and bank loans (Figure 3, panels 1–4).[4] This composition of inflows is again consistent with patterns observed in the New Member States.[5] As in the New Member States, capital outflows from the Western Balkans were also predominantly FDI and bank flows, though with a smaller share of the latter, and (as noted above) lower overall outflows (Figure 3, panels 5–8).

Correspondingly, in the early stages of transition, most external liabilities were in the form of external debt. On the external asset side, foreign exchange reserves and other debt assets accounted for the lion's share of Western Balkans' holdings in the 1990s, as in the New Member States. The share of equities increased in both assets and liabilities, though it increased later for assets and remains at a lower level, and further behind the New Member States (Figure 4).

Figure 4. Equity and reserves shares
(Percent)



Sources: External Wealth of Nations database.
Note: Equity shares refer to shares of equity assets (liabilities) in total external assets (liabilities). Reserves share refers to the ratio of foreign exchange reserves to total external assets.

Today, liabilities as a percent of GDP are broadly comparable to the New Member States, while assets remain somewhat lower (Figure 5, panels 1 and 2).[6] Equity shares in liabilities are comparable to those in the New Member States; while equity shares in assets remain lower (Figure 5, panels 3 and 4).

Looking at the evolution of capital flows and external positions in the Western Balkans thus points to important similarities with the New Member States. While slightly 'late to the game', the Western Balkans economies appear to have caught up rapidly with the New Member States (though both regions of course contain heterogeneity in country

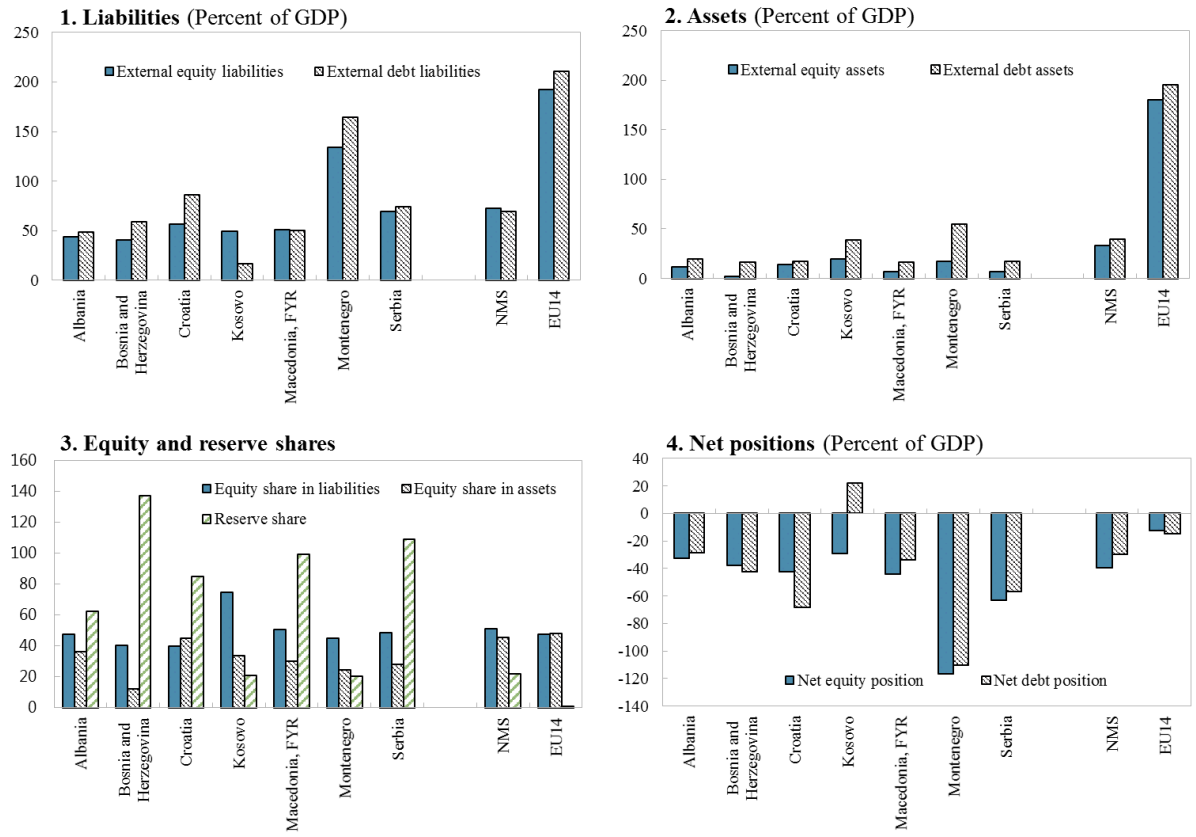
[4] For the 1995–2014 period as a whole FDI accounted for around half of all inflows, while 'other investment flows' (mostly bank lending) constituted a further 40 percent. During 2006–08 bank inflows gained importance as foreign bank networks became more prevalent in the Western Balkans.

[5] Portfolio inflows were small or even negative: portfolio equity (debt) flows averaged around 0.2 (1) percent of GDP in the Western Balkans; portfolio debt flows were only slightly higher in the New Member States.

[6] Within the region, Montenegro is characterized by much higher liabilities and worse net positions, while Kosovo has better net debt positions.

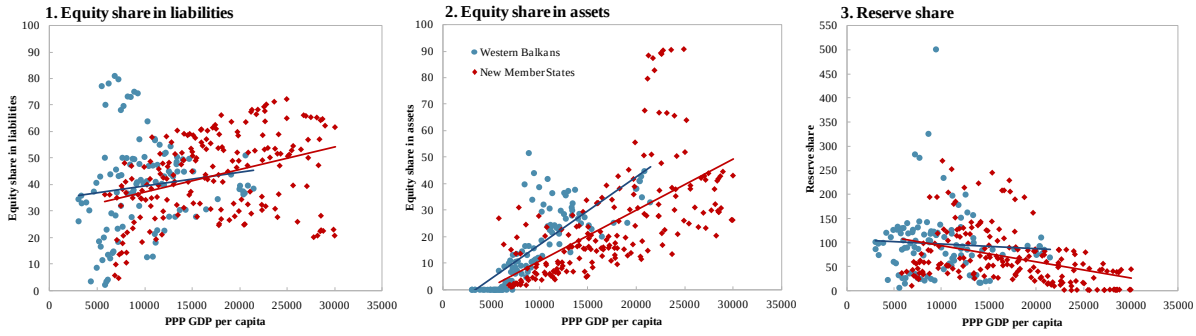
experiences within them). Capital flows account for broadly comparable shares of GDP, and consist mainly of FDI and bank lending, though outflows still play a smaller role in the Western Balkans. Equity shares are far above what would be expected given their level of development (Figure 6), and reserve shares are much higher in the Western Balkans than in the New Member States.

Figure 5. External positions in the Western Balkans, the New Member States and the EU14, 2014



Sources: External Wealth of Nations database.
Note: Equity shares refer to shares of equity assets (liabilities) in total external assets (liabilities). Reserves share refers to the ratio of foreign exchange reserves to total external assets. Net equity (debt) positions refer to equity (debt) assets minus equity (debt) liabilities.

Figure 6. Equity and reserve shares in the Western Balkans and the New Member States , by level of development



Sources: External Wealth of Nations database, World Development Indicators and World Economic Outlook database.
Note: Equity shares refer to shares of equity assets (liabilities) in total external assets (liabilities). Reserves share refers to the ratio of foreign exchange reserves to total external assets.
Dots refer to country-years, including the Western Balkans and the New member States for the years 1995-2014.

These similarities, however, hide a marked difference in capital account openness (Annex Figure 1). Capital account openness increased in both the Western Balkans and the New Member States in the late 1990s and early 2000s, however, while this trend continued in the New Member States until the global financial crisis, reaching levels close to those observed in the EU14, the Western Balkans has, on average, remained much more closed. The relative similarity of capital inflows is thus all the more striking, suggesting that factors such as a skilled, relatively cheap labor force and expectations of potential future EU membership were more important in driving investment decisions than the extent of capital controls.

V. DETERMINANTS OF CAPITAL FLOWS

Having examined the evolution of external positions and the behavior of capital flows to the Western Balkans, the following section aims to extend the analysis by looking at the determinants of capital flows, examining the role of common factors, as well as structural characteristics and policy frameworks.

Two complementary estimation strategies are used.[7] First, we examine the role of common factors in driving capital flows to the region. In order to do so, average capital flows to the Western Balkans (and for comparison to the New Member States) are regressed on key economic explanatory factors such as the growth differential between the region and the EU-14, interest rates in the EU14[8], global investors' risk appetite (measured using the logarithm of the VXO), and percentage changes in oil prices (controlling also for seasonal dummy variables):

$$\overline{Kflows_t} = \gamma_0 + \gamma_1(\bar{g}_t^{WB} - \bar{g}_t^{EU14}) + \gamma_2 \bar{ir}_t^{EU14} + \gamma_3 riskaversion_t + \gamma_6 \Delta P_t^{oil} + \boldsymbol{\varphi S_t} + u_t,$$

in which $(\bar{g}_t^{WB} - \bar{g}_t^{EU14})$ is the common growth rate differential between the Western Balkans and the EU14, and $\bar{ir}_t^{EU14}$ is a simple average of real policy rates in the EU14.

Second, the cross-country distribution of gross capital inflows is modeled using a panel regression (with country fixed effects) of capital inflows on country-specific economic factors, such as country-specific growth differentials, institutions, capital controls, whether

[7] The estimation strategy closely follows that in IMF (2016). The macroeconomic variables used in the regressions, such as GDP and capital flows, influence each other in complex ways, making it difficult to obtain clear causal estimates. The main goal of the analysis is therefore to establish robust correlations, examining which variables track the evolution of capital flows more strongly.

[8] Our baseline specification excludes interest rates in the Western Balkans as consistent long time series are unfortunately difficult to obtain – while for some countries data on policy rates is available, others only have deposit rates. Results are very similar when adding interest rates for the Western Balkans as well (Annex Tables A.1 and A.2), with high interest rates in the region often mopping up the effects of increasing global risk aversion. Interest rates are included in levels rather than as differentials, since interest rate differentials are highly collinear with growth differentials and thus difficult to separate empirically.

the country is under an IMF program and percentage changes in the terms of trade (controlling for time fixed effects):

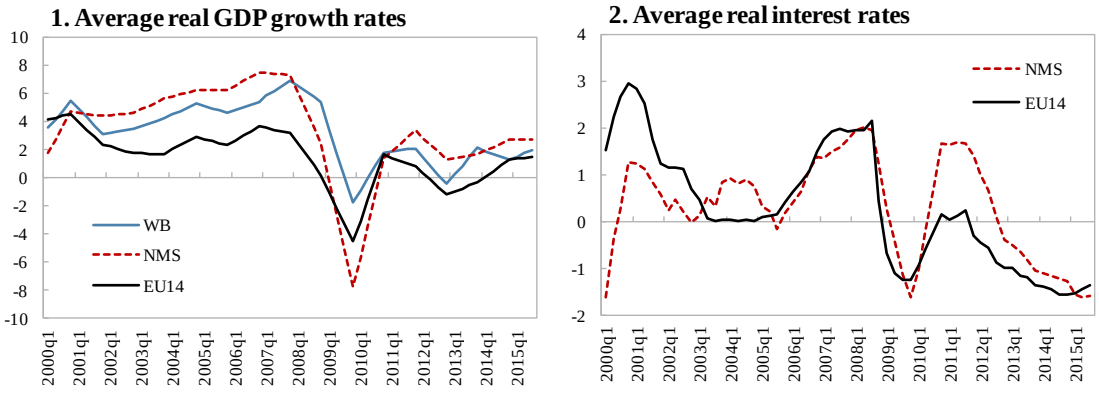
$$Kflows_{it} = \theta_0 + \theta_1\left(g_{it} - \bar{g}_{it}^{EU14}\right) + \theta_2 institutional\ quality_{it} + \theta_3 capital\ controls_{it} + \theta_4 IMF\ loan_{it} + \theta_5 \Delta termsoftrade_{it} + \boldsymbol{\tau T_t} + \varepsilon_{it},$$

in which $\left(g_{it} - \bar{g}_{it}^{EU14}\right)$ is the growth rate differential between the country's own growth rate and a simple average of EU14 growth rates, and $\boldsymbol{T_t}$ are a set of quarter dummy variables.

Within each step, inflows and outflows are examined separately given evidence that gross inflows and gross outflows have in their own right—rather than just in terms of the net gap between them—a distinct importance in determining systemic risk (Avdjiev, McCauley, and Shin 2015).

Average growth rate differentials between the Western Balkans and the EU14, interest rates in the EU14 and global investor risk appetite are estimated to be statistically significant determinants of average capital inflows (Table 1). The results are qualitatively similar for the New Member States, with somewhat larger effects of EU14 interest rates and somewhat smaller effects of the growth differential (though these effects are difficult to separate empirically; Figure 7). These factors also appear to explain more of the variation in the New Member States than in the Western Balkans. Examining growth differentials of the Western Balkans relative to the New Member States rather than the EU14 and controlling for interest rates in the New Member States yields similar results. EU14 and New Member States growth and interest rates followed similar trends in the period examined here, thus again making it difficult to separate their effects empirically (Figure 7).

Figure 7. Average growth and real interest rates
(Percent)



Sources: Global Data Source, World Economic Outlook database.

These results are broadly in line with the existing literature on the New Member States, which highlighted the role of push factors (a favorable global environment, characterized by declining interest rates, abundant liquidity, low risk aversion and low global volatility produced a willing supply of capital, especially from the EU15, see e.g. Bakker and

Gulde 2010) and pull factors (the anticipation of rapid growth and high returns, seen as a natural part of the catching-up process as well as the result of low wages and low capital-labor ratios, as well as post-transition reforms, see e.g. Lipschitz and others 2002).

Table 1. The role of global factors in explaining average gross capital inflows

Growth differential (WB-EU14)	2.648***			2.203***
	(0.540)			(0.628)
Growth differential (NMS-EU14)		1.755***		
		(0.632)		
Growth differential (WB-NMS)			1.152**	0.571
			(0.564)	(0.540)
Interest rates (EU14)	2.008***	3.684***		1.770*
	(0.628)	(0.663)		(0.998)
Interest rates (NMS)			3.406***	1.024
			(0.880)	(0.860)
Global risk aversion (log)	-3.783*	-5.785***	-4.342	-5.150
	(2.146)	(2.117)	(2.818)	(3.188)
Change in the oil price	-0.0142	0.0348	-0.00646	-0.0194
	(0.0312)	(0.0270)	(0.0288)	(0.0341)
Sample	*WB*	*NMS*	*WB*	*WB*
Number of obs.	63	63	63	63
Adjusted R-squared	0.325	0.572	0.192	0.318

Note: * denotes significant at 10 percent, ** at 5 percent, * at 1 percent. Seasonal dummy variables and a constant are included but not reported.

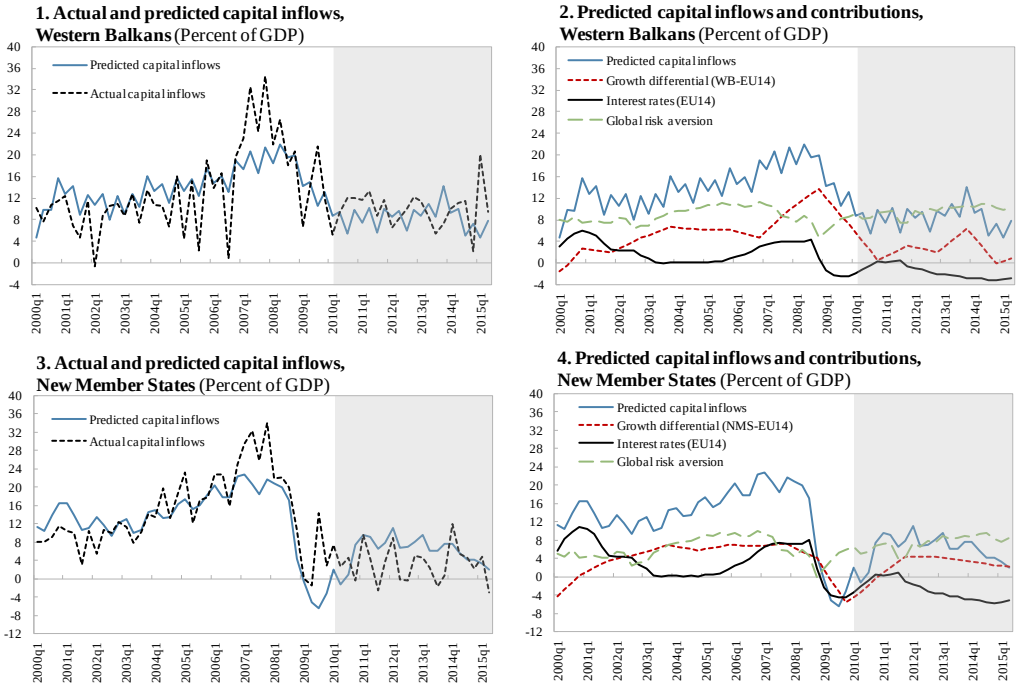
To gauge the economic significance of the explanatory variables, panels 1 and 2 in Figure 8 compare actual average capital inflows to the Western Balkans with predictions from this regression and contributions from each explanatory variable. Corresponding results for the New Member States are reported in panels 3 and 4.

Panels 1 and 3 point to a tight empirical link between the actual and predicted capital inflows. Panels 2 and 4 suggest that the decline in inflows shows a strong association with the shrinking real GDP growth differential relative to the EU14. Diminished growth prospects counterbalance the effect of decreasing risk aversion, which would predict an increase in capital inflows during this period.

Predictions underestimate the boom somewhat, in the Western Balkans as well as in the New Member States, possibly pointing to some overoptimism, beyond what was warranted purely based on growth and interest rate differentials. On average they match the slowdown in capital inflows since 2007 in the Western Balkans quite well, though appear to overpredict capital inflows to the New Member States, suggesting that perhaps it is not inflows to the Western Balkans, which held up unusually well, but flows to the New Member States, which underperformed relative to what could have been expected given the past

relationship of capital flows to growth and interest rate differentials—perhaps as a natural consequence of the catching-up process to the EU15. Continued FDI inflows to the Western Balkans could also have included finalizations of projects launched before the start of the global financial crisis, as well as some new greenfield investments that continue to be attracted by lower factor costs and in some cases lower exchange rates (see also Jevčák, Setzer and Suardi 2010).[9] In terms of cross-country variation, better governance and competition policy have been associated with smaller drops in capital flows. The relative illiquidity of assets may also have mitigated foreign investors' ability to withdraw capital quickly.

Figure 8. The Role of Common Factors for Capital Inflows

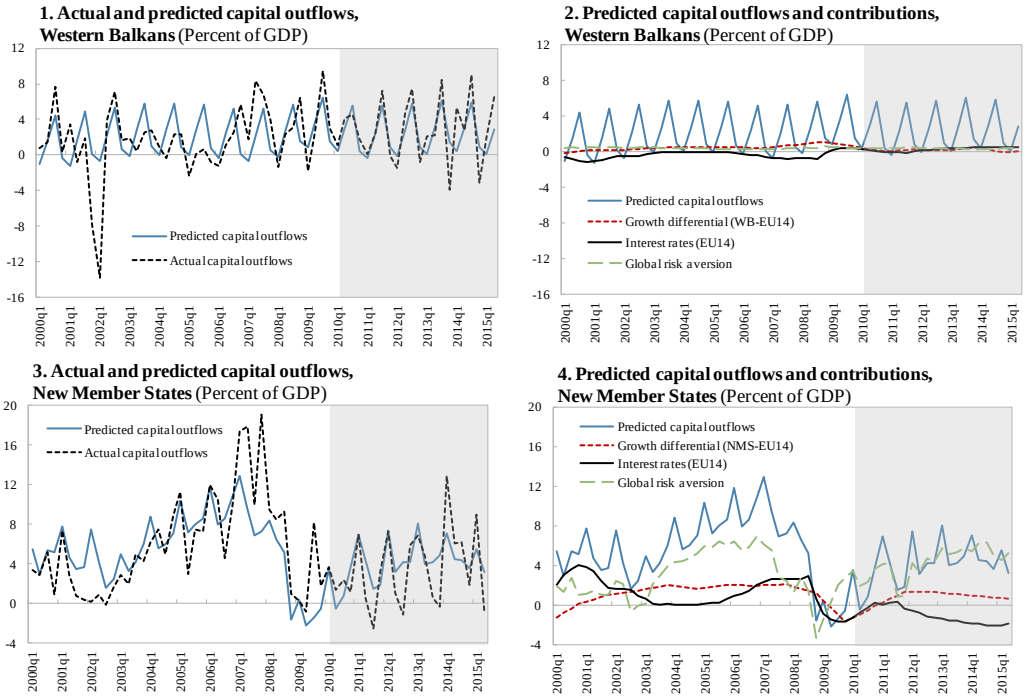


Sources: Fernandez, Klein, Rebucci, Schindler and Uribe (2015), Financial Flow Analytics, Global Data Source, Haver Analytics, Standard and Poor's, World Economic Outlook, World Governance Indicators.
Note: Average capital flows are regressed on growth differentials, advanced economy interest rates, global risk aversion, the change in the oil price and seasonal dummies. Contributions of the change in the oil price very small and thus not reported. Predicted capital flows refer to the predicted values from this regression.

Figure 9 presents symmetric results for capital outflows, with the regression results reported in Table 2. Outflows from the Western Balkans have been volatile and appear hard to predict using these explanatory variables, with seasonality dominating the predicted values. As noted earlier, outflows are still much lower in the Western Balkans than in the New Member States, with fewer domestic institutional investors. Predictions for the New Member States do somewhat better, capturing the pick-up in outflows which accompanied the increase in inflows in the boom years. Global risk aversion appears to be the key driver of outflows from the New Member States.

[9] An in-depth analysis of the pull factors for FDI flows is outside the scope of this paper.

Figure 9. The Role of Common Factors for Capital Outflows



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Note: Average capital flows are regressed on growth differentials, advanced economy interest rates, global risk aversion, the change in the oil price and seasonal dummies. Contributions of the change in the oil price very small and thus not reported. Predicted capital flows refer to the predicted values from this regression.

Table 2. The role of global factors in explaining average gross capital outflows

Growth differential (WB-EU14)	0.219			0.0295
	(0.291)			(0.354)
Growth differential (NMS-EU14)		0.508		
		(0.350)		
Growth differential (WB-NMS)			0.453*	0.421
			(0.258)	(0.278)
Interest rates (EU14)	-0.377	1.347***		-0.209
	(0.455)	(0.501)		(0.490)
Interest rates (NMS)			0.0295	0.141
			(0.366)	(0.514)
Global risk aversion (log)	0.164	-5.792***	-1.188	-0.962
	(1.344)	(1.293)	(1.494)	(1.939)
Change in the oil price	0.00103	0.00196	-0.00644	-0.00409
	(0.0164)	(0.0183)	(0.0152)	(0.0171)
Sample	*WB*	*NMS*	*WB*	*WB*
Number of obs.	63	63	63	63
Adjusted R-squared	0.242	0.393	0.264	0.239

Note: * denotes significant at 10 percent, ** at 5 percent, * at 1 percent. Seasonal dummy variables and a constant are included but not reported.

While these results point to the role of common factors, their importance depends on policy characteristics that are country specific (Figure 10). Results are qualitatively similar in the Western Balkans and the New Member States (and in line with the findings of IMF 2016a for emerging markets in general):

- Economies that are financially more open appear more exposed to the common trend in capital inflows to the region: a higher share of the total variance of capital inflows is explained by the common time effect (controlling for differences in countries' growth performance) in countries with more open capital accounts.

- Larger, less financially developed, less liquid countries are also less exposed to common trends, in line with the results of Eichengreen and Gupta (2014).

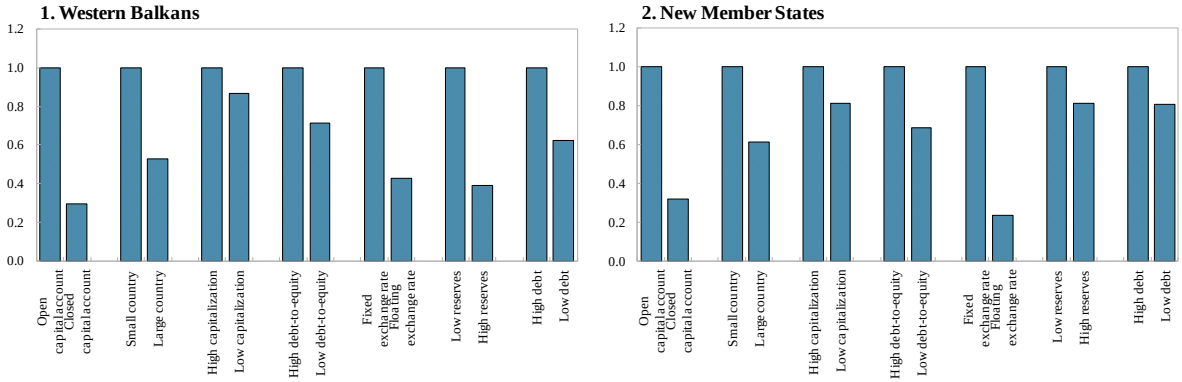
- More flexible exchange rates also reduce the share of the total variance of capital inflows explained by common factors.[10] Countries that have flexible exchange rate regimes would tend to see immediate currency depreciations in response to a broader downward trend in the supply of capital. By making domestic assets cheaper, a weaker currency would tend to attract capital into the country. Thus, exchange rate flexibility would reduce the sensitivity of capital inflows to global factors.[11]

- Countries that have higher reserves and lower public debt tend to have a lower percentage of the fluctuations in capital inflows attributable to common factors. Because higher reserves and lower public debt reduce country risk, foreign investors would be less tempted to pull out from countries with those characteristics, making their capital inflows more resilient to shifts in the global factor affecting all the emerging market economies.

[10] A large literature has studied the effectiveness of the exchange rate as a shock absorber. There is scarce evidence, however, on its role in smoothing the global capital flow cycle. Magud and others (2014) provide evidence that exchange rate flexibility smoothens the domestic credit cycle but find no evidence that exchange rate flexibility dampens capital flows per se in their regression analysis.

[11] It should however be added that the classification used here refers to *de facto* exchange rate regimes. Examining effective exchange rate flexibility using the Calvo-Reinhart (2002) 'fear of floating' index suggests that no currency in the Western Balkans is effectively floating, with the partial exception of Serbia (IMF 2016b). While the larger variance explained by common factors for peggers could be driven by differences in the composition of flows (in the New Member States peggers attracted more bank flows than floaters, especially during the boom years, while floaters attracted more FDI, see IMF 2016b), there does not seem to be a clear distinction in the Western Balkans in this respect.

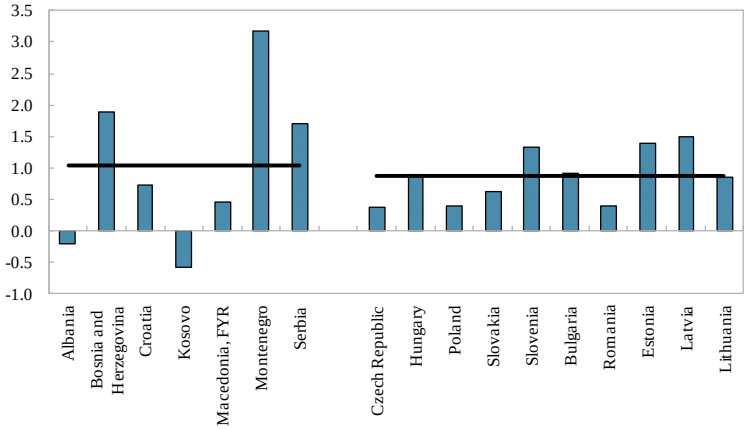
Figure 10. Share of Variation in Total Capital Inflows Explained by Global Factors (Percent)



Sources: Fernandez, Klein, Rebucci, Schindler and Uribe (2015), Financial Flows Analytics, IMF Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER), World Economic Outlook.
Note: R-squares from a regression of capital inflows on average capital inflows, normalized using within-group standard deviations of flows, base group set to 1. Fernandez, Klein, Rebucci, Schindler and Uribe (2015) measure for controls on capital inflows, split at 0.5. Fixed and floating exchange rates defined using the IMF's AREAER classification. High and low reserves measured in months of imports, split at the sample median. High and low government debt split at the sample median. For a description of the sample see Annex 2.1, for a detailed description of the methodology see Annex 2.2, for included variables and sources see Annex 2.3.

The second step of the analysis focuses on the role of structural characteristics and policies in shaping the dynamics of capital flows to the Western Balkans. To this end, the section uses a panel-data specification that relates country-specific capital flows to country-specific growth differentials, an indicator of institutional quality, the degree to which capital inflows are restricted by law, whether the country is under a large IMF-sponsored adjustment program, changes in its terms of trade and time fixed effects. The regression (shown in Table 3), results in positive and significant coefficients on the growth differential and institutional quality.[12] Baseline regressions are based on an unbalanced panel for the period 2000-2015. As the global financial crisis could have affected the responses of capital flows to changes in various characteristics, a robustness check examined the same regression, while excluding the years 2007 and 2008. As expected, the growth differential is still highly significant (now for both the Western Balkans and the New Member States), while institutional quality is no longer significant, but still large and positive. Results are robust to controlling for workers' remittances as a share of GDP, which, although large for Albania,

Figure 11. Cross-country variation in the association between growth and capital inflows



Source: Financial Flow Analytics and World Economic Outlook.
Note: Coefficient estimates based on country-by-country regressions of capital inflows on real GDP growth.

[12] Baseline regressions use the World Governance Indicators 'rule of law' measure. Results are qualitatively similar when using alternative measures of institutions such as the ICRG measure of the 'quality of the bureaucracy'.

Bosnia and Herzegovina, Kosovo and Serbia, does not have a significant effect on capital flows for the region as a whole. Results are similar in sign and magnitude, though not statistically significant for the New Member States. Country by country time series regressions, however, point to considerable heterogeneity across countries in the association between growth and capital flows (Figure 11), with the effect being largest in Montenegro, but also particularly large in Serbia and Bosnia and Herzegovina.

Table 3. The role of country-specific factors in explaining gross capital inflows

Growth differential (country-EU14)	0.618*	0.660
	(0.213)	(0.530)
Institutional quality	17.64*	12.46
	(6.147)	(7.279)
Capital account openness	-0.580	1.031
	(0.924)	(0.869)
IMF program	7.010	2.996
	(3.772)	(3.922)
Change in terms of trade	0.0925	-0.00867
	(0.312)	(0.374)
Sample	*WB*	*NMS*
Number of obs.	196	560
Adjusted R-squared	0.177	0.299

Note: * denotes significant at 10 percent, ** at 5 percent, * at 1 percent. Seasonal and quarter dummy variables and a constant are included but not reported.

Table 4. The role of country-specific factors in explaining gross capital outflows

Growth differential (country-EU14)	0.542*	-0.279
	(0.192)	(0.509)
Institutional quality	1.962*	8.637
	(0.776)	(5.072)
Capital account openness	0.0413	1.222
	(1.084)	(0.695)
IMF program	0.781	-0.0673
	(1.340)	(1.774)
Change in terms of trade	0.111	-0.260
	(0.129)	(0.305)
Sample	*WB*	*NMS*
Number of obs.	220	560
Adjusted R-squared	-0.021	0.098

Note: * denotes significant at 10 percent, ** at 5 percent, * at 1 percent. Seasonal and quarter dummy variables and a constant are included but not reported.

VI. CONCLUSIONS

The Western Balkans have witnessed dramatic changes over the past 25 years. Financial integration took off somewhat later than in the New Member States, but has increased rapidly, despite still much lower capital account openness. Capital inflows as a share of GDP are comparable to those observed in the New Member States, (perhaps surprisingly) diverse in terms of source countries and in both regions FDI and bank lending account for the bulk of inflows as well as outflows (though the latter are still small in the Western Balkans), while shares of equity assets in total external assets are much higher than they were in the New Member States at comparable levels of development.

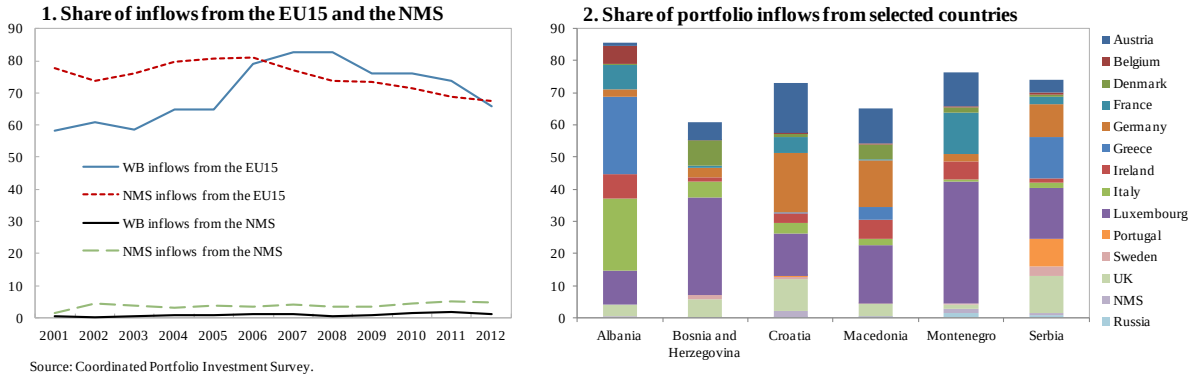
Similar to the experience of the New Member States, the region experienced booming inflows in 2003–07, driven by a combination of push and pull factors: a willing supply of funds from Western Europe and expectations of high growth in Emerging Europe. Booming inflows provided financing and supported private sector development and employment, however their sharp drop as a result of the global financial crisis and strong link with growth point to vulnerabilities. So far inflows have held up better than in the New Member States, however the similarities in terms of their determinants point to caution: capital inflows are pro-cyclical, thus potentially raising vulnerabilities by amplifying external shocks.

Box 1. Geographic distribution of flows

In addition to the aggregate data, it is useful to understand the bilateral composition of capital flows to the Western Balkans. First, the identity of foreign investors may be important in the transmission of international financial shocks—a banking crisis in country X will have a greater spillover impact the more important is this group in country X's external asset portfolio. Second, the pricing of assets depends on the composition of the investor base, since asset returns are more highly correlated between countries that have a tighter degree of financial integration. Third, bilateral investment patterns are important in assessing the valuation impact on the external position of movements in key currencies: a devaluation against the euro will be more important than a devaluation against say the pound to the extent that foreign currency debt is mostly denominated in the former currency (see Lane and Milesi-Ferretti 2006).

Geographic proximity seems to be an important driver of capital flows, with Western European countries the dominant external investors in the region. Most of the portfolio investment in the Western Balkans comes from the EU-15: 60–80 percent of total portfolio investment in the Western Balkans on average, similar to the ratio for the New Member States (Figure 1.1, panel 1). Investment from the New Member States remained below 5 percent even at its peak, being directed mostly to Croatia and more recently to Montenegro. Intra-regional investment remains negligible in comparison; even within the New Member States it is mostly below 5 percent, with the exceptions of Latvia (with a peak at 10 percent) and Slovakia (with a peak at over 20 percent).

Figure 1.1. Source of portfolio inflows, from selected regions and countries
(Percent of total inflows)



Source: Coordinated Portfolio Investment Survey.
Note: Data not available for the Netherlands on the sending side, and Kosovo on the receiving side. Panel 2 refers to averages over 2001-2012.

Within the EU15 the picture is perhaps surprisingly diverse (Figure 1.1, panel 2). Austria, Germany and Greece play prominent roles, to a lesser extent so do France, the UK and Italy (mostly in Albania). While bilateral data on foreign direct investment is less reliable and patchier than for portfolio flows, it broadly confirms the pattern, with Austria, Germany and Greece playing important roles, a larger role for the New Member States and (as expected) a smaller role for financial centers (Luxembourg and the UK). The pattern is similar to that

observed in the New Member States, where Austria and Germany are especially significant; Denmark, Finland and Sweden are prominent investors in the Baltics and Greece is important for Bulgaria and Romania.

Bilateral investment flows also correlate strongly with migrant destinations, with the exception of Luxembourg, as a financial centre, and Ireland and the UK, whose labor markets have remained relatively closed to the Western Balkans (Table 1.1). This could be driven by a combination of geographic (linguistic) factors or historical ties driving both investment and migration patterns, or by investment by migrants and their children in their home countries.

Table 1.1. Bilateral migration stocks and portfolio flows

Migration stock as a share of population, 2000

	Austria	*Belgium*	*Denmark*	*Finland*	*France*	*Germany*	*Greece*	*Ireland*	*Italy*	*Luxemb.*	*Netherl.*	*Portugal*	*Spain*	*Sweden*	*UK*	*EU15*
Albania	0.1	0.1	0.0	0.0	1.0	7.2	13.6	0.0	8.9	0.0	0.0	0.0	0.0	0.0	0.0	31.0
Bosnia and Herzegovina	4.1	0.1	0.8	0.0	1.0	5.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	1.4	0.0	13.2
Croatia	1.9	0.0	0.0	0.0	0.2	5.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.1	0.0	7.9
Macedonia	1.0	0.1	0.1	0.0	0.2	2.7	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.1	0.0	6.5

Portfolio investment as a share of total inward portfolio investment, 2001-2012 average

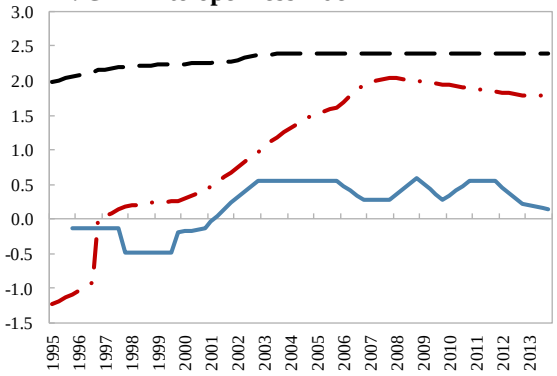
	Austria	*Belgium*	*Denmark*	*Finland*	*France*	*Germany*	*Greece*	*Ireland*	*Italy*	*Luxemb.*	*Netherl.*	*Portugal*	*Spain*	*Sweden*	*UK*	*EU15*
Albania	0.9	5.5	0.4	0.0	7.6	2.3	24.0	7.5	22.6	10.4		0.0	0.0	0.0	3.9	85.0
Bosnia and Herzegovina	5.6	0.0	7.9	0.0	0.5	2.9	0.0	1.5	4.8	30.5		0.0	0.0	1.1	5.8	60.7
Croatia	15.3	0.4	1.0	0.1	5.0	18.4	0.5	2.7	3.3	13.3		0.2	0.1	0.7	9.9	70.8
Macedonia	10.8	0.3	4.7	0.0	0.4	14.3	3.9	5.9	2.2	18.0		0.0	0.0	0.0	4.0	64.6

Sources: Coordinated Portfolio Investment Survey; World Bank, Global Bilateral Migration database; World Bank, World Development Indicators.
Note: Bilateral migration data not available for Kosovo, Montenegro and Serbia; bilateral portfolio investment data not available for Kosovo on the receiving side and the Netherlands on the sending side. Red denotes over 10 percent, yellow 5-10 percent, green 1-5 percent.

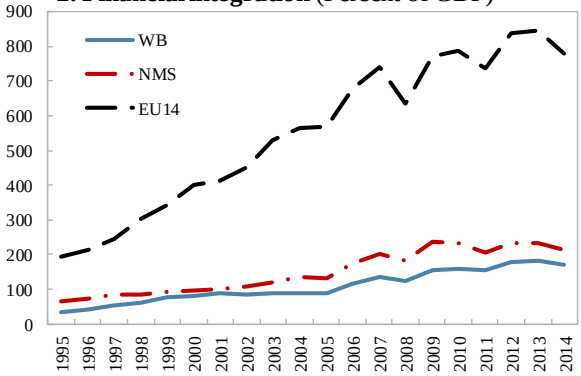
Annex Figures and Tables

Annex Figure 1. Financial integration and capital account openness

1. Chinn-Ito openness index



2. Financial integration (Percent of GDP)



Sources: External Wealth of Nations database, Chinn and Ito (2006).

Annex Table A.1. The role of global factors in explaining average gross capital inflows

Growth differential (WB-EU14)	2.138***			1.967***
	(0.625)			(0.601)
Growth differential (NMS-EU14)		1.765***		
		(0.650)		
Growth differential (WB-NMS)			0.885	0.437
			(0.713)	(0.550)
Interest rates (EU14)	3.577***	3.697***	4.695***	(omitted)
	(1.071)	(0.955)	(1.076)	
Interest rates (NMS)		-0.0661		
		(0.957)		
Interest rates (WB)	-1.764***		-2.428***	(omitted)
	(0.645)		(0.648)	
Global risk aversion (log)	-1.083	-5.799***	-1.363	-2.243
	(2.028)	(1.678)	(2.827)	(2.622)
Change in the oil price	-0.0109	0.0341	-0.0168	-0.0164
	(0.0303)	(0.0282)	(0.0296)	(0.0266)
Sample	*WB*	*NMS*	*WB*	*WB*
Number of obs.	63	63	63	63
Adjusted R-squared	0.425	0.562	0.319	0.424

Note: * denotes significant at 10 percent, ** at 5 percent, * at 1 percent. Seasonal dummy variables and a constant are included but not reported.

Annex Table A.2. The role of global factors in explaining average gross capital outflows

Growth differential (WB-EU14)	-0.0956			-0.265
	(0.368)			(0.317)
Growth differential (NMS-EU14)		0.453		
		(0.296)		
Growth differential (WB-NMS)			0.371	0.432*
			(0.266)	(0.257)
Interest rates (EU14)	0.574	1.237***	0.736	(omitted)
	(0.625)	(0.416)	(0.478)	
Interest rates (NMS)		0.242		
		(0.554)		
Interest rates (WB)	-1.068***		-1.007**	(omitted)
	(0.399)		(0.424)	
Global risk aversion (log)	1.754	-5.915***	0.491	0.609
	(1.497)	(1.277)	(1.800)	(1.570)
Change in the oil price	0.00291	0.00201	-0.00257	-0.00261
	(0.0195)	(0.0173)	(0.0158)	(0.0153)
Sample	*WB*	*NMS*	*WB*	*WB*
Number of obs.	63	63	63	63
Adjusted R-squared	0.323	0.381	0.346	0.340

Note: * denotes significant at 10 percent, ** at 5 percent, * at 1 percent. Seasonal dummy variables and a constant are included but not reported.

References

Ahmed, Shaghil, and Andrei Zlate. 2013. "Capital Flows to Emerging Market Economies: A Brave New World?" International Finance Discussion Paper 1081, Board of Governors of the Federal Reserve System, Washington.

Árvai, Zsófia. 2005. "Capital Account Liberalization, Capital Flow Patterns, and Policy Responses in the EU's New Member States" IMF Working Paper WP/05/213, International Monetary Fund, Washington.

Avdjiev, Stefan, Robert N. McCauley, and Hyun Song Shin. 2015. "Breaking Free of the Triple Coincidence in International Finance." BIS Working Paper 524, Bank for International Settlements, Basel

Bakker, Bas B., and Anne-Marie Gulde. 2010. "The Credit Boom in the EU New Member States: Bad Luck or Bad Policies?" IMF Working Paper WP/10/130, International Monetary Fund, Washington.

Chinn, Menzie D. and Hiro Ito. 2006. "What Matters for Financial Development? Capital Controls, Institutions, and Interactions" *Journal of Development Economics* 81(1): 163-192.

Claessens, Stijn, Daniel Oks, and Rossana Polastri. 2000. "Capital Flows to Central and Eastern Europe and the Former Soviet Union". In: Edwards, Sebastian (Ed.) Capital Flows and the Emerging Economies: Theory, Evidence, and Controversies, National Bureau of Economic Research of Economic Research, Chicago.

Eichengreen, Barry, and Poonam Gupta. 2014. "Tapering Talk: The Impact of Expectations of Reduced Federal Reserve Security Purchases on Emerging Markets" Policy Research Working Paper 6754, The World Bank, Washington.

Gabrisch, Hubert. 2015. "Net Capital Flows to and the Real Exchange Rate of Western Balkan Countries" *Economic Annals*, LX(205).

Ganić, Mehmed. 2013. "The Integration of Western Balkan Economies in Global Economic Flows". Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2382459

Globan, Tomislav. 2015. "Financial integration, push factors and volatility of capital flows: evidence from EU new member states" *Empirica* 42:643–672.

IMF 2016a. Understanding the Slowdown in Capital Flows to Emerging Markets. April 2016 World Economic Outlook, International Monetary Fund, Washington.

IMF 2016b. Taking Stock of Monetary and Exchange Rate Regimes in Emerging Europe. European Department Special Report, International Monetary Fund, Washington.

Jevčák, Anton, Ralph Setzer, and Massimo Suardi. 2010. "Determinants of Capital Flows to the New EU Member States Before and During the Financial Crisis" Economic Papers 425, European Commission, Directorate-General for Economic and Financial Affairs, Brussels.

Koepke, Robin. 2015. "What Drives Capital Flows to Emerging Markets? A Survey of the Empirical Literature." Working Paper, Institute of International Finance, Washington.

Kovtun, Dmitriy, Alexis Meyer Cirkel, Zuzana Murgasova, Dustin Smith, and Suchanan Tambunlertchai. 2014. "Boosting Job Growth in the Western Balkans" IMF Working Paper WP/14/16, International Monetary Fund, Washington.

Lane, Philip R., and Gian Maria Milesi-Ferretti. 2006. "Capital Flows to Central and Eastern Europe" IMF Working Paper WP/06/188, International Monetary Fund, Washington.

Lankes, Hans Peter, Nicholas Stern, W Michael Blumenthal, and Jiri Weigl. 1999. "Capital Flows to Eastern Europe" In: Feldstein, Martin (Ed.) International Capital Flows. National Bureau of Economic Research, Chicago.

Lipschitz, Leslie, Timothy Lane, and Alex Mourmouras. 2002. "Capital Flows to Transition Economies: Master or Servant?" IMF Working Paper WP/02/11, International Monetary Fund, Washington.

Magud, Nicolas E., Carmen M. Reinhart, and Esteban Vesperoni. 2014. "Capital Inflows, Exchange Rate Flexibility, and Credit Booms." *Review of Development Economics* 18 (3): 415–30.

Mitra, Pritha. 2011. "Capital Flows to EU New Member States: Does Sector Destination Matter?" IMF Working Paper WP/11/67, International Monetary Fund, Washington.

Murgasova, Zuzana, Nadeem Ilahi, Jacques Miniane, Alasdair Scott, Ivanna Vladkova-Hollar, and an IMF Staff Team. 2015. "The Western Balkans: 15 Years of Economic Transition" Regional Economic Issues Special Report, International Monetary Fund, Washington.

Nier, Erlend, Tahsin Saadi Sedik, and Tomas Mondino. 2014. "Gross Private Capital Flows to Emerging Markets: Can the Global Financial Cycle Be Tamed?" IMF Working Paper WP/14/196, International Monetary Fund, Washington.

von Hagen, Jürgen, and Iulia Siedschlag. 2010. "Managing Capital Flows: Experiences from Central and Eastern Europe". In Kawai, Masahiro, and Mario B. Lamberte (Eds.) Managing Capital Flows in Asia: Search for a Framework. Cheltenham and Northampton, MA: Edward Elgar.