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The debt buildup process: Bosnia and Herzegovina – Republic of Srpska versus other European countries

Процес стварања дуга: Босна и Херцеговина – Република Српска у односу на остале европске земље

Summary

Financial and economic crisis from 2008 created debt problems throughout the world, in developed and developing coutries. Although the problems cause by the crisis were similar for all coutries there were some specific diferences between them. Here, effects of firm's indebtedness in the Republic of Srpska are analysed in comparison with 15 European countries before and after the crisis, which serve as a benchmark. In the RS and also other considered countries in the collapse year (2009), the relative debt increases of under and over median firms differed drastically. In the main crisis year of 2009 the RS had 2 percentage points higher impact (relative to the Core European countries) of the financial accelerator or/and correspondingly different effect of the shape of firm investment distribution on the debt increase. In 2009, country specific effects on the debt build-up process disappeared for all other observed countries except the RS, while in the year after the collapse they disappeared in the RS and picked upped again in all other countries, showing lagging of the impact of the crisis as well as a milder effect in the RS.

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Keywords: *Republic of Srpska, debt, GDP per capita, recession, financial investments, indebtedness*

Резиме

Финансијска и економска криза из 2008. године је створила проблем дуга широм свијета, како у развијеним земљама, тако и у онима у развоју. Иако су проблеми изазвани кризом били слични за све земље, постоје неке специфичне разлике између њих. Ефекти задужености фирми у Републици Српској су анализирани у поређењу са 15 европских земаља, прије и послије кризе, које служе као мјерило. У Републици Српској као и у другим посматраним земљама у години колапса (2009.) повећања релативног дуга мањих и већих фирми се драстично разликују. У главној кризној години (2009.) Република Српска је имала за два процентна поена већи утицај финансијског акцелератора (у односу на главне европске земље) и / или одговарајуће другачији ефекат облика дистрибуције инвестиција фирме на повећање дуга. У 2009. год специфични ефекти земље на процес стварања дуга су нестали за све посматране земље осим Републике Српске, док су у години након колапса нестали у Републици Српској, а поново се јавили у свим осталим земљама, што показује одлагање ефеката кризе, те блаже ефекте у Републици Српској.

Кључне ријечи: *Република Српска, дуг, БДП по глави становника, рецесија, финансијске инвестиције,задуженост.*

Introduction

Although the Western Balkan countries were hardly hit by the present crisis they have been given much less attention than other comparable economies in the world (Chakrabarti, 2012). Still the effect of the crisis varies both in size and timing as various factors influenced the transmission of the global crisis (among others the openness and structure of the economy, institutional setting of the capital and labor market, indebtedness of sectors, etc.). In addition, different efforts to address the crisis and to overcome its consequences have been proposed. Even though the majority of firms were affected in some way, this paper analyses how firm indebtedness affected firms in The Republic of Srpska of Bosnia and Herzegovina (hereinafter RS) compared to 15 European countries before and after the crisis which serve as a benchmark. In particular, we analyse data gathered for firms in RS, Slovenia, Croatia, the Republic of Macedonia, Montenegro, Ser-

bia, Portugal, Spain, Italy, Greece, Germany, France, Austria, the Czech Republic, Slovakia and Hungary.

Firstly, we briefly present the relevant macroeconomic situation in Bosnia and Herzegovina (hereinafter BIH) and RS. This is followed by methodological background, which extends the research done by Prašnikar et al. (2012) where the relative position of 16 European countries in non-financial corporation debt increase and level achieved in the 2006–2010 is documented. We continue with empirical evidence from the model of the financial accelerator specification, which is enlarged by country dummies and give our conclusions at the end. [4]

1. Institutional setting and macroeconomic picture of Republic of Srpska [5]

Despite many years of consecutive growth, the country's GDP figures are still quite low. GDP per capita in the RS increased from 2,164 EUR in 2006 to 2,959 EUR in 2010. Economic growth was stimulated by international assistance, increased foreign and domestic investments, the credit boom funded by foreign banks and booming domestic demand financed from abroad (Prašnikar and Knežević Cvelbar, 2012). In the period 2005–2008, the sectors of trade, agriculture, construction, manufacturing and real estate, renting, and business activities contributed to the nominal growth of GDP most.

One of Bosnia and Herzegovina's main goals after the war was to create a stable currency, with which they could control inflation. To ensure the stability they decided to adopt the currency board and pegged their Bosnian Convertible Mark to the German Mark and then to the Euro. Consequent to the sucsessfull implementation the inflation was put under control and in 2010 inflation in the RS was just 2.5 percent.

Increased stability and healthy economic conditions also laid the foundations for the development of the financial sector. This was mostly true for the banking sector, where many foreign banks entered and attained a dominant position. They became the most important channel of foreign capital inflow to the country and significantly contributed to the economic growth, which was mainly based on a credit expansion (Bartlett and Monastiriotis, 2010). Growth in the amount of loans in the years before the crisis was very high and in that period household debt as well as financial and non-financial institutions debt increased (see Table 1). When the crisis struck the worsening financial health of companies and households meant that banks cut back their loan portfolios and credit growth

[4] Work in progress: preliminary results.

[5] We discuss data on RS when they are available. If not, data for the whole of Bosnia and Herzegovina are discussed.

was stopped. An important event in the banking sector was the signing of the Memorandum of Understanding with parent banks in the European Union (EU). This obliged banks to keep exposure related to capital funding and keep the same level of loans as in 2008 (Prašnikar and Knežević Cvelbar, 2012). In addition, the new 24 month Stand-by arrangement with the International Monetary Fund (IMF) (of 520$ million) also presents a powerful buffer against external shocks from ongoing Euro area crisis shocks and reduced loans from foreign banks.

Difficult business conditions and limited access to sources of funding led banks to the implementation of more restrictive lending policies, with the aim to maintain business stability and safety as well as preserve liquidity (IRBRS, 2011). However, the 2011 growth was again supported by positive trends in the banking sector where long- and short-term corporate loans grew in the first nine months by 4 per cent and 14 per cent, respectively. (IRBRS, 2012).

The recession had a big impact also on the country's fiscal position. While in 2007 there was no general government deficit in the RS, it reached 9 percent of GDP just two years later (IMF, 2011). To tackle the threatened macroeconomic stability and low public confidence in a Stand-by Arrangement with the IMF, BIH committed itself to implement comprehensive fiscal austerity measures and structural reforms and to focus on firm restructuring (EBRD, 2011).

Table 1: *Key macroeconomic and indebtedness indicators for RS*

Category / sub-category	2006	2007	2008	2009	2010	2011
Basic macroeconomic data						
GDP (in million EUR)	3,346	3,759	4,341	4,204	4,247	4,433
GDP per capita (in EUR)	2,317	2,611	3,020	2,930	2,964	3,100
Real GDP growth rate (in %)	6.0	6.7	6.2	-3.0	0.8	0.8
CPI (average change in %)	6.4	1.1	7.2	-0.4	2.5	3.9
General government debt						
Gross (in % of GDP)*	21.8	32.9	31.2	36.1	39.6	n/a
Net (in % of GDP)*	13.6	18.5	21.8	27.5	32.5	n/a
General government primary net lending/borrowing (in % of GDP)	2.0	0.4	-0.8	-6.6	-5.0	-0.7
Household debt						
Gross*	24.0	29.4	31.8	31.8	31.7	n/a
Non-financial institutions' debt						
Gross* (in % of GDP)	25.9	30.7	36.3	36.9	38.6	n/a
Financial Institutions						
Gross debt (in % of GDP)	43.3	68.1	65.1	58.0	57.0	n/a
Leverage of domestic banks	12.7	8.9	9.6	10.2	13.0	n/a
Bank claims on public sector (in % of GDP)	0.7	1.3	2.4	3.3	3.8	n/a

Category / sub-category	2006	2007	2008	2009	2010	2011
External liabilities						
Gross (in % of GDP)	25.9	22.1	20.7	22.6	26.5	n/a
Government debt held abroad* (in % of GDP)	22.4	20.5	20.8	26.4	31.5	n/a

* Data for BIH

Source: Cirman et. al., 2012; BIH Agency for Statistics, 2011; Central Bank of Bosnia and Herzegovina, 2011; IMF, 2012; IRBRS, 2012; Republic of Srpska Institute of Statistics, 2011.

2. Methodological basis for the research

When speaking of frictions in financial markets, they lead to inefficient functioning's of markets, which are not accounted for in standard macroeconomic models (Stiglitz, 2011). Based on the literature on asymmetric information and agency costs in lending relationship, in their seminal work, Bernarke et. al. (1999) present how the financial accelerator drives the endogenous development in credit markets, which results in strong propagation and amplification of (external) macroeconomic shocks. In the model, the entrepreneurs' net worth comes from two sources: profits (including capital gains) accumulated from previous capital investment and income from supplying labour. With the presence of capital market frictions, net worth matters because a borrower's financial position is a key determinant of his cost of external finance. Higher levels of net worth allow increased self-financing, mitigating the agency problems associated with external finance and reducing the external finance premium. An unanticipated rise in asset prices raises net worth more than proportionately, which stimulates investment, and in turn, raises prices even further (the so-called financial accelerator). As actual returns of indebt firms are higher than expected, this leads to bubbles which might lead to a balance sheet crisis after the crisis evolves (Bernanke et al., 1999; Miller and Stiglitz, 2010; Bole et al., 2012a), where collaterals and contagions become important factors for the amplification of the crisis. It is, thus, the mechanism of the financial accelerator, which endogenously drove the amplification and propagation of the process of companies' debt accumulation, triggered by external shocks.

The dynamics of the potential main debt drivers in the RS, namely, core and financial investments, are being studied. We identified factors, which could, besides the median dynamics of core and financial investments, considerably influence the impact of the investments on the debt build-up process of companies. Country differences in the financial intermediation system, company leverage and the way of their financing, the size of companies etc. could result in

the country specific size of the financial accelerator, which could also seriously modify the effects of the same (median) investment dynamics of the debt process.

In the following section, the evolution of the firm distribution of debt, core and financial investments is documented for the boom-bust period 2007–2010. The simple model of the debt build-up process is specified using the financial accelerator model as a starting point. Country group effects are estimated using fixed dummies. The main focus is placed on the analysed debt increasing trajectory in the 2007–2010 period, where the RS is compared to other sample European countries.

3. Empirical evidence on the firm debt, core investments and financial investments distribution in the boom-boost period 2007–2010

Description of the data for the RS

The initial firm's indebtedness analysis of the RS is based on financial data from the Amadeus Database. Our sample included 477 companies. However, the sample was further reduced to 399 companies, to only include those with a non-zero financial debt and available data on all variables used in the estimation of the model. The median values of the observed firms for the selected variables per unit of average total balance sheet are reported in Table 2.

Table 2: *Median values of three selected variables in proportion to average total assets*

Variable	2007	2008	2009	2010
Financial debt	0.116	0.131	0.138	0.144
Investments in core activities	0.057	0.071	0.039	0.039
Financial investments	0.000	0.000	0.000	0.000

Source: Cirman et. Al., 2012; Amadeus Database, 2012; own calculations.

Figure 1: *Yearly differences in financial debt*

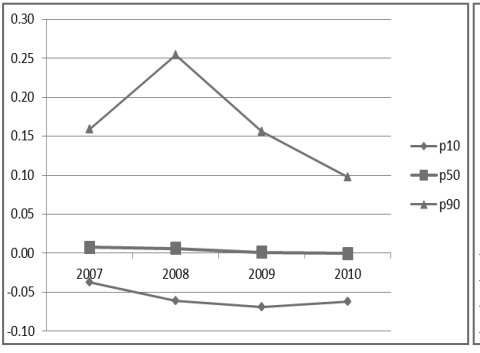


Figure 2: *Investments in core activities*

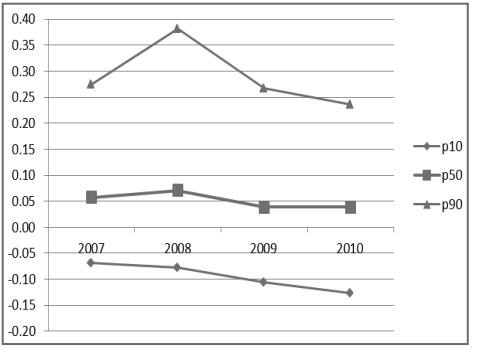
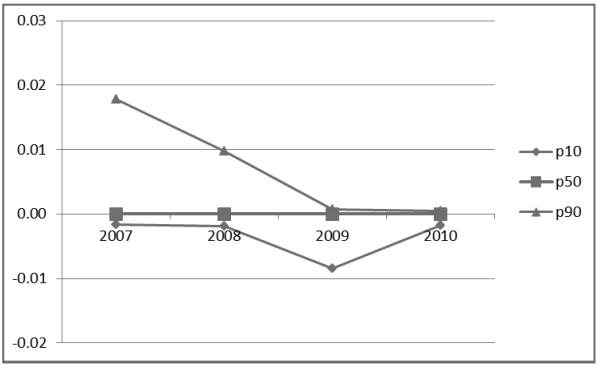


Figure 3: *Investments in financial assets*



Source: Cirman et. Al., 2012; Amadeus Database, 2012; own calculations.

In the 2007–2010 period financial debt as a proportion of the average balance sheet sum of a median firm in the RS increased for 2.8 percentage points of the balance sheet. The dynamic of the debt increase was, however, severely biased to upper part of firms distribution, as documented in Figure 1, which shows yearly differences in financial debt. The figure also shows, that biasedness decreased considerably after 2008. Namely, the 90th percentile firm (the most indebted firms in the sample) began to slow debt increasing significantly, after 2008.

Investments in core activities as a proportion of average balance sheet sum of a median firm decreased in 2009 significantly and the behaviour was also similar for the 10th and 90th percentile firms (Figure 2 and Figure 3). The median firm had no financial investments. A 90th percentile firm witnessed a substantial decrease in financial investments in the observed period, from 1.8 percent of average balance sheet sum in 2007 to 0.1 percent of average balance sheet sum in 2010.

Distribution of the enterprise debt process dynamics

A similar data sampling process and indebtedness and investments movement analysis was done for each country in the sample, which accounted for more than 9,300 companies. Individual reports for the countries can be found in Prašnikar (2012).

In Figures 4-7 the dynamics of firms' debt build-up process in RS are compared with corresponding process in Europe for the 2007–2010 boom-bust period. Financial debt increments are given in units of balance sheet sum. The distribution of dynamics is presented for five quintiles (p10, p25, p50, p75 and p90) of firms from the manufacturing and services sectors. Point estimates are given for the RS, and intervals are provided (maximal and minimal values) for all other studied European countries.

Figure 4: Debt build-up process, 2007

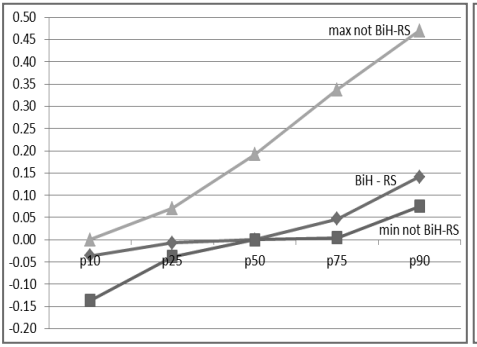


Figure 5: Debt build-up process, 2008

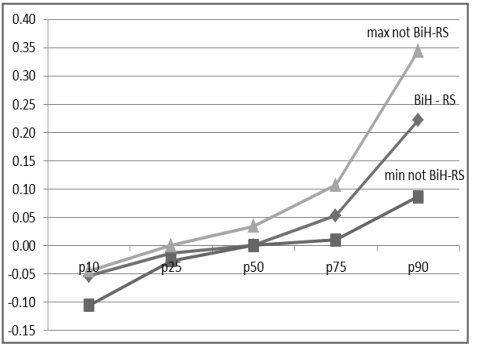


Figure 6: Debt build-up process, 2009

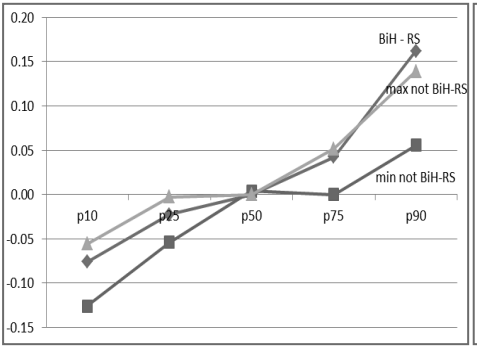
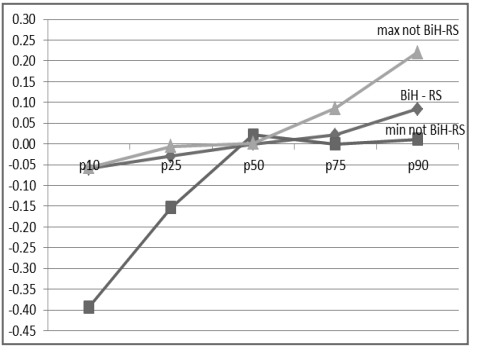


Figure 7: Debt build-up process, 2010



Source: Amadeus Database, 2012; own calculations.

In RS, the high increases in debt before 2009 and drops following were only limited to a small share (around 10-25 per cent) of firms. The presented yearly distributions of the debt increase in 2007 show that the median firm had no increase, while the debt increments in the first quartile were negative (in absolute terms less than 5 per cent of balance sheet sum) and at third quartile positive (and less than 5 per cent of balance sheet sum). In RS the impact of the factors, which drove the debt process in 2007 was negligible. It was close to the lowest non-BS country and much lower than for the highest benchmarking country (the upper end of other European countries for 2007 and 2008 pertains to Slovenia, which had particularly higher increases in debt than other studied countries).

However, in 2008 one can already notify changes in the (relative) dynamics of indebtedness of the third and fourth quartiles companies in the RS , which highly increased its financial debt. In the collapse year (2009), the relative debt increases of companies in the RS under and over the median differed drastically. Namely, over median firms' debt increments in the RS were near and over the highest values (for the corresponding quartiles) of the other studied European countries. At the same time the under median quartiles of firms in RS decreased

debt similarly as the average deleveraging quartiles of firms in the benchmark countries. This result probably reflects the delay in crisis effects in the RS. In 2010 the debt increases were smaller again.

Distribution of the firm core investments process dynamics

Two factors of the debt increasing process are explicitly studied, firms' core investments and financial investments. In what follows, core investments are defined as a sum of fixed capital investments, change in inventories and other investments in working capital.

The distribution of the firm core investments dynamics is illustrated in Figures 8-11. Core investments figures are given in units of total balance sheet sum. Similar to the financial debt figures, core investments dynamics are presented for five quintiles of RS firms as well as for interval (upper and lower) values of core investments in corresponding quintiles, for the studied European countries.

Figure 8: Core investments dynamics, 2007

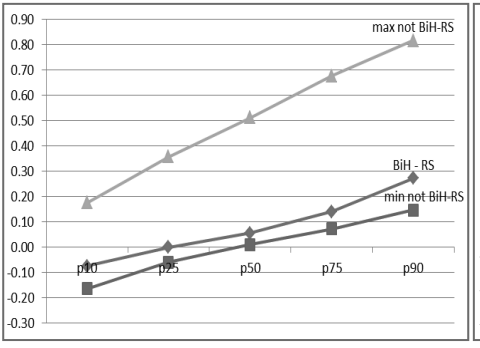


Figure 9: Core investments dynamics, 2008

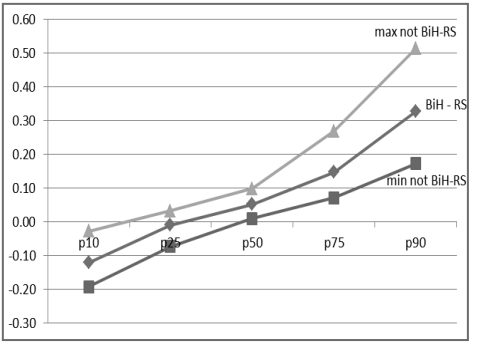


Figure 10: Core investments dynamics, 2009

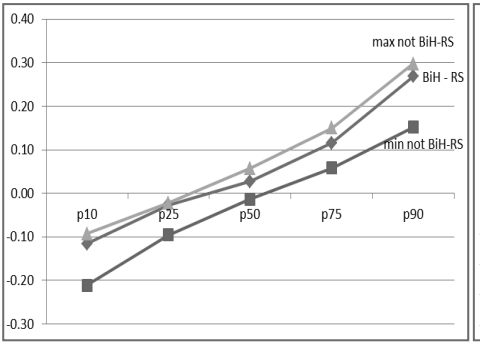
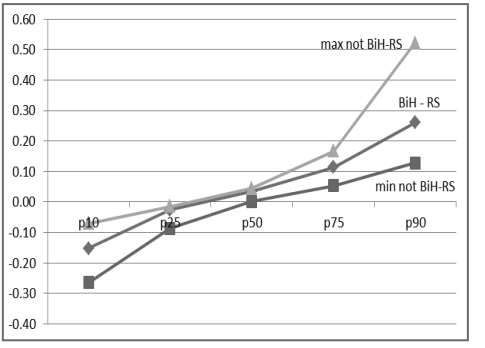


Figure 11: Core investments dynamics, 2010



Source: Ajpes, Amadeus Database, 2012; own calculations.

Observing the firm distribution of core investments dynamics between the RS and the studied European countries we can see that they were moving similarly

as in other countries. Although in the climax of the boom period (in 2007) core investments of the RS firms were much closer to the minimum of other European countries (the maximum again pertains to Slovenia where investments in core activities were much higher than in all other studied countries), almost uniformly over whole distribution of firms. Figures show, heuristically speaking, that firms in the RS were much less aggressive regarding investments in core activities in the boom period, than firms in other studied countries over the whole distribution of enterprises.

Figure 10 documents, that in the bust period, the shape of the firms' distribution of core investments dynamics moved closer to the maximum (as dynamics of other European countries calmed down almost uniformly across firms). More cautious investment behaviour in boom years obviously enabled firms in the RS to have (relative to studied countries) stronger investments in crisis years. We can also observe that core investments dynamics in boom-bust period (2007–2010) in the RS were predominantly concentrated in the last quartile of firms.

Distribution of the firm financial investment process dynamics

Empirically studied financial investments are defined as a sum of short and long-term financial investments in the debt and equity instruments. The firm distributions of financial investments dynamics are documented in Figures 12-15. Figures for financial investments are given in units of balance sheet sum. Again values for five quintiles are presented for the RS as well as interval (upper and lower) values of financial investments for studied European countries in corresponding quintiles.

Figure 12: Financial inv. dynamics, 2007

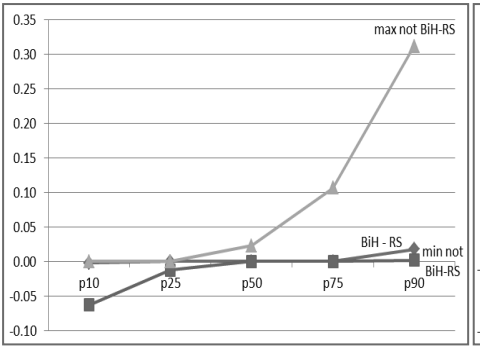


Figure 13: Financial inv. dynamics, 2008

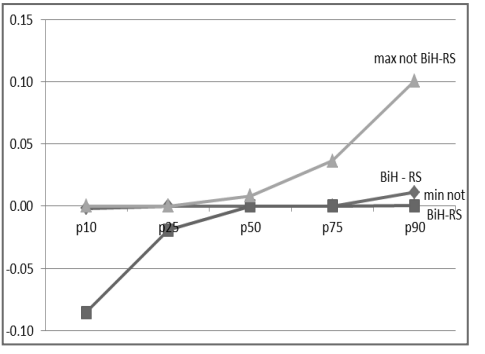


Figure 14: Financial inv. dynamics, 2009

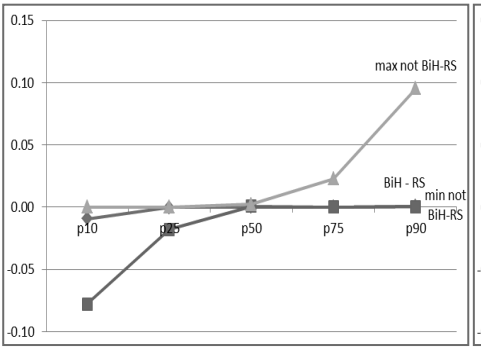
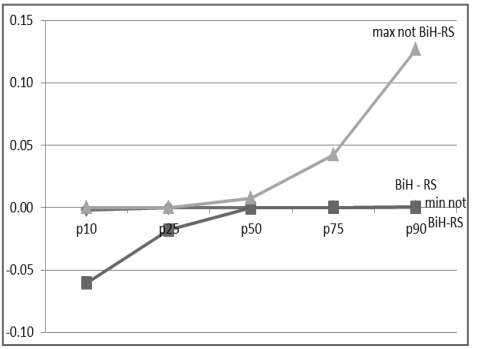


Figure 15: Financial inv. dynamics, 2010



Source: Ajpes, Amadeus Database, 2012; own calculations.

The financial investments figures reveal three interesting facts, two of which refer to the difference between the distribution dynamics of core investments dynamics and the corresponding distribution dynamics of financial investments and one, which refers to the difference between the RS and other European countries, the distribution dynamics of financial investments.

Firstly, in all the studied countries, dynamics of financial investments fluctuated considerably less across firms than core investments dynamics (differences between upper values in the last quintiles and lower values in the first quintiles are much smaller).

The second interesting fact pertains to the shape of the firm distribution of financial investments dynamics. Namely, the financial investments in the whole boom-bust period were considerably (more than core investments) limited to a small share (around first decile) of firms. Concerning the median enterprises there were almost no differences between countries in the financial investments dynamics.

Thirdly, in all years of the boom-bust period, the described shape of the firm financial investment dynamics distribution in the RS coincide with the minimum of other European countries for all presented quintiles of firms. This fact documents that conservative investment policies were in place in the RS regarding financial investments.

4. Mechanism of the debt increasing process – quantification of country specifities

In the analysed boom-bust period 2007–2010, non-financial corporation debt increases differed enormously among the studied countries. The top debt performers were Croatia, Montenegro and Slovenia, for which firm debt increased by over 25 percent of GDP. In contrast, Germany, the Republic of Macedonia and the Czech Republic lagged behind most, with the debt increase in

the non-financial corporations of less than 5 percent of GDP. Such a country rank (structure) of the non-financial corporations debt increase seems unexpected, because the main debt drivers[6] do not show the same country ranks and even both exposed groups of countries are different.

The country differences in the firm distribution of investments and the size of the financial accelerator are probably the most important factors behind the mentioned country differences in the debt driver's impact on the debt intensity process. In short, we will mark these differences as *country specifities* (in the debt build-up process). The high policy makers' importance of these country specifities documents the fact that very specifities are also crucial for the size of the bust damages (lost product and employment) in the studied period 2007–2010. Namely, the impact of both, the *sudden stop* effect (sudden-unexpected drop in the loanable funds inflow) and *collateral amplification* effect, on the bust damages depends on the size of the financial accelerator (and, therefore, the average size of firms debt dynamics), as well as on the firms distribution of debt dynamics (conditional on the average size of debt) immediately before the regime switch (bubble burst).[7]

To quantify the mentioned country specifities in the debt build-up process, the model of the financial accelerator specification is enlarged by country dummies.[8] It could be expected, that these dummies would predominantly encompass the effects of the (country) differences in the size of the financial accelerator as well as the effects of the differences in the firm distribution of investment dynamics.

Because the model is specified with the financial accelerator, the financial and core investments are the main debt drivers in the model. Four dummies were added. The first dummy stands for the manufacturing enterprises, the second dummy for the Balkan group of countries (Slovenia, Croatia, the Republic of Macedonia, Montenegro and Serbia), the third dummy stands for the Mediterranean group of countries (Italy, Portugal, Greece and Spain) and the fourth dummy for the RS. Such a specification of the model entails, that countries from the Core of Europe (Austria, the Czech Republic, France, Germany, Hungary and Slovakia) figure stand as a reference for other countries. The sample includes financial statements data for over 9,300 manufacturing and service sector companies from the mentioned countries.

To mitigate heteroscedasticity problems, debt, financial investments and core investments variables are given in units of balance sheet sum. The debt model is specified and estimated for the boom bust (2007–2010) period, for every year

[6] For more on the theoretical model of the debt drivers in the boom-bust period see Bole et al. (2012).

[7] See Dagher (2010), Calvo (1998), Calvo et al. (2007) and Miller and Stiglitz (2010).

[8] On the specification of the financial accelerator model in debt modelling, see Bole et al. (2012).

separately. The models are estimated with the ordinary least squares method (OLS) and, because of possible endogeneity problems, also with instruments. The lagged values of the explanatory variables, employment and capital are used as instruments. Simple OLS estimates of the model are given in Table 2, and instrumentalised estimates in the Table 3. Because data for 2006 is not available (in estimating the model for 2007, instrumental variables would have to also be available for 2006), instrumentalized estimates are given only for the 2008–2010 period.

Table 3: *The OLS estimations of financial debt*

	2007	2008	2009	2010
Financial investments	0.430***	0.336***	0.188***	0.171***
	(0.068)	(0.076)	(0.037)	(0.044)
Investments in core activities	0.213***	0.000	0.191***	0.173***
	(0.021)	(0.000)	(0.027)	(0.027)
Manufacturing sector (dummy)	-0.000	-0.002	-0.003	-0.011***
	(0.003)	(0.003)	(0.003)	(0.003)
Western Balkan countries without the RS (dummy)	0.023***	0.027***	0.001	0.019***
	(0.005)	(0.005)	(0.004)	(0.004)
The RS (dummy)	0.006	0.018***	0.022***	0.006
	(0.005)	(0.007)	(0.007)	(0.006)
Mediterranean countries (dummy)	0.012***	0.004	-0.001	0.011***
	(0.003)	(0.003)	(0.003)	(0.003)
Constant	0.008***	0.016***	-0.004*	-0.002
	(0.002)	(0.002)	(0.002)	(0.002)
Observations	9327	9310	9319	9163
R-squared	0.176	0.033	0.096	0.086

Note: Service sector and core European countries serves as a base dummy
Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Source: Amadeus, 2012; own calculations.

Table 4: *Instrumental variables estimations of financial debt*

	2008	2009	2010
Financial investments	0.489*	-0.078	0.183*
	(0.257)	(0.267)	(0.106)
Investments in core activities	0.048	0.095**	0.049
	(0.038)	(0.047)	(0.039)

	2008	2009	2010
Manufacturing sector (dummy)	-0.009	-0.003	-0.009***
	(0.008)	(0.003)	(0.003)
Western Balkan countries without the RS (dummy)	0.014	0.005	0.023***
	(0.010)	(0.004)	(0.004)
The RS (dummy)	0.008	0.021***	0.009
	(0.011)	(0.006)	(0.006)
Mediterranean countries (dummy)	-0.006	0.002	0.011***
	(0.009)	(0.003)	(0.003)
Constant	0.024**	-0.002	-0.000
	(0.011)	(0.002)	(0.002)
Observations	8853	8830	8826
Hansen's J chi2	(1) 0.06065 (p = 0.8055)	(5) 7.04376 (p = 0.2174)	(5) 3.50885 (p = 0.6220)
GMM C statistic chi2	(2) 2.50397 (p = 0.2859)	(2) 2.53599 (p = 0.2814)	(2) 4.69633 (p = 0.0955)

Note: Service sector and core European countries serves as a base dummy
Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Source: Amadeus 2012; own calculations.

In all years, except in 2008, both investment variables are significant in the OLS estimated models; in 2008 only the financial investment variable is not significant. The size of both investment variables coefficients (accelerators) is approximately the same in both bust years, but not in the boom years, where the coefficient of financial investments is higher.

The Western Balkan countries dummy is significant in 2007, 2008 and 2010, Mediterranean countries dummy is significant in 2007 and 2010 and RS dummy is significant in 2008 and 2009. The size of the dummy coefficient for the RS documents that the impact of the RS specifities in the debt build-up process differed from that in other studied countries. In 2007 and 2010 there was no significant difference between the RS and the Core European countries, yet the Mediterranean and the Western Balkans group of countries had higher impact of investments on debt changes. In 2008, the effect of financial investments on debt increases through the financial accelerator in the RS was higher than in the Mediterranean countries and the Core European countries but lower than in the Western Balkans group of countries (without the RS).

Interestingly in the bust year of 2009 the RS had 2 percentage points higher impact (relative to the Core European countries) of the financial accelerator or/ and correspondingly different effect of the shape of firm investment distribution

on the debt increase. All other dummies for 2009 were insignificant, suggesting the delayed impact of the crisis on the RS. In the second year of the bust period (2010), the pick-up of the corresponding impact of the group of the Western Balkan and Mediterranean countries specifities were much higher.

Observing instrumental variables estimates in the boom years the difference of the impact of financial accelerator and/or firms' distribution of investment dynamics on the debt build-up process cannot be observed (country specifities disappeared – coefficients are insignificant). In the collapse year (2009), the RS dummy reveals that basic empirical evidence about country specifities received by the OLS estimates is also confirmed by the instrumentalized estimates. The same holds for the *year after the collapse* (2010), country specifities picked upped again, but the difference cannot be observed in the RS.

Conclusion

In all the studied countries, high increases in debt before the collapse in 2009 and drops afterwards were limited to only a small share (around 10-25 percent) of enterprises (except for Slovenia where the debt increase was uniform across the distribution of enterprises). In the RS, the debt build-up process accelerated (relative to studied countries) especially in 2009 (especially at the higher end of distribution of debt dynamics); obviously the crisis came to the RS with a delay and smaller intensity than in benchmark countries.

In the RS (and also other countries of the sample) in the collapse year (2009), the relative debt increases of under and over median firms differed drastically. The over median firms debt increments were near and over the highest values in benchmark countries, while the under median firms were in the middle of firm debt increments in the other studied European countries.

In the RS, the core investments dynamics in the climax of the boom period (in 2007) documents much more conservative investment policy than in benchmark countries.; it was close to lowest country values attained in all other European countries studied. In 2009 the core investment activity was closer to highest values in all other countries in the sample, showing the undisrupted on going investment activity in the RS and decrease of it in other countries.

In all the studied countries the dynamics of financial investments fluctuated considerably less across firms than core investments dynamics, in the studied boom-bust period. Contrary to core investments, the outstanding values of the firm financial investments were only limited to both decile ends of the firm distribution, while financial investments of 80 percent of enterprises in the middle of the distribution were of small or even negligible size.

In the boom years, the impact of financial accelerator and specific enterprises distribution of investment dynamics on the debt build-up process was not as great in the RS as in some other European countries in the sample. In 2008, this additional effect (relative to the Core European countries) attained almost 2 percent of balance sheet sum in the Western Balkan countries and only 1 percent in the RS. In the collapse year (2009), this country specific effects on the debt build-up process disappeared for all other observed countries except the RS, while in the *year after the collapse* they disappeared in the RS and picked upped again in all other countries, showing lagging of the impact of the crisis as well as a milder effect in the RS.

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