Financial integration and access to finance in transition economies: a sectoral approach

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March 2010

JEL classification: E44, G14, G32, O16
Keywords: Assess to finance, macroeconomic imbalances, industry sectors, transition economics

Abstract:
In this paper, we perform an empirical analysis of enterprise level data from the BEEPS on the access to finance in European transition economies which conducted the financial integration based economic development model in the pre-crisis period. By running a probit model, we obtain evidence that manufacturing enterprises face significantly greater problem of access to finance that services enterprises. We also saw, from a descriptive analysis of the same dataset, that exporting enterprises are concentrated in manufacturing industry. Our interpretation of the underlying mechanism of such a difference in access to finance across sectors is based on the information asymmetry theory. Since the majority of loans are intermediated by foreign banks, as uninformed lenders, these banks account in their cost of capital a certain market risk with the help of sovereign ratings by international agencies. This risk, already evaluated as high, face some lenders from sectors with lower risk (lower return rates, and longer period of return of investment, such as most of manufacturing industry) with discouraging costs of borrowing and lets them out of the lending market. This distortion in the lending market pushes then growth in sectors with higher returns (able to pay high interest rates). These are more likely services sectors which participate significantly less than manufacturing sectors in overall country's exports. In that way, besides pushing growth, this mechanism also contributes to unsustainable levels of current account deficits in these countries, which, together with high levels of accumulated external debt, create high external financing needs of these countries, all three variables being strong determinants of country's risk perception by international rating agencies.

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* The authors have benefithed from valuable comments from Boris Najman and Aleksa Nenadovic, from research assitance from Natasa Celikovic and Jana Grujic, as well as language corrections from Katarina Dimitrijevic. All remaining errors are ours.

1. Finance and growth in transition economies

There is a long-lasting record in both theoretical and empirical literature on the topic of the role of financial development in economic growth. The idea dates back to Schumpeter (1912) who emphasized the positive impact of the development of country's financial sector on the growth and level of its per capita income. The main argument behind such a stream in both the theoretical and empirical literature that emerged meanwhile, lies in market imperfections. Namely, by solving problems of information asymmetry, transaction costs and moral hazard, financial intermediaries provide the allocation of capital to the highest value use, and thus catalyse economic growth.

Economic growth is being influenced by the development of the financial system in five different ways having in mind the main functions provided by the financial system, as summarized in Levine (1997). Firstly, financial development improves mobilizing and pooling of savings in an economy. Secondly, the better supply of information will lead to a more optimal allocation of resources. Thirdly, there will be better incentives for monitoring of investments and implementation of corporate governance. Fourthly, it will become easier to trade, diversify and manage risks. Fifthly, transactions concerning goods and services will be facilitated. All these advantages of having a sound financial sector can contribute in two different ways to a higher per capita economic growth. Firstly, these advantages will lead to a higher capital stock (capital accumulation) and secondly they can speed up technological development. In this perception, a higher allocative efficiency leads to an increasing propensity to both save and invest, which stimulates capital accumulation and technological renewal. In the end, this will boost economic growth.
Hence, the empirical literature on the same issue suffers from the so called causality problem, since it seams that there is no strong enough evidence for the causality direction for the however significant correlation between financial development and economic growth[1].

Despite the concerns about the causality direction, the result of the rich literature in this field, concerning particularly developing countries, can be summarized in the following main conclusions, as presented in the referent review of the empirical literature on the financial development and economic growth. Though admitting that "we are far from definitive answers to the question: Does finance cause growth, and if it does, how?", Levin (2004) highlights the following three tentative observations from the existing work, "without ignoring the weaknesses of and the absence of complete unanimity of results". Taken as a whole, the bulk of existing research suggests that (1) countries with better functioning banks and markets grow faster, but the degree to which a country is bank-based or market-based does not matter much, (2) simultaneity bias does not seem to drive these conclusions, and (3) better functioning financial systems ease the external financing constraints that impede firm and industrial expansion, suggesting that this is one mechanism through which financial development matters for growth."

[1] Joan Robinson (1952) was among the first authors in the theoretical literature, arguing the opposite causality direction, i.e. from growth to financial development. She stated that "where enterprise leads finance follows". Moreover, some authors suggest that both financial development and economic growth could be influenced by a third macroeconomic variable, such as the marginal propensity of saving, or they simply ignore the link.

2. The macroeconomic framework of the banking sector development in transition economies in light of the world economic crisis

The "development model" pursued in European transition economies[2] from the mid 90s until the spillover of the world economic crisis to the region has been qualified as "development based on financial integration"[3]. The economic integration in these countries into the global economy took place on three main fronts: trade, finance and labour. The first – trade channels – correspond to the expansion in trade volumes exchanged between these countries and EU-15 countries and achieving a significant level of trade openness (
Table 1). The second – labour channel – has manifested itself as worker remittances from EU-15 countries to European transition economies expanded particularly rapidly during the mentioned, pre-crisis, transition period. And financial integration took probably the most impressive pace. Namely, having reduced barriers to capital account transactions, these countries represented an open field for financial market development. The presence of foreign banks grew dramatically both through local subsidiaries of EU-15 based commercial banks and through direct cross-border lending of EU banks to enterprises based in European transition countries[4]. The credit to private sector has been growing at very high rates helping these markets to grow from almost an absence of financial intermediation to comparable levels of credit to GDP with developed peers (Table 2).

The described economic integration was definitely a powerful driver of growth, income convergence and rising living standards in transition economies (Graph 1). Hence, besides this incontestable benefit for the overall level of activity and living standard, the pursued integration has also been responsible for generating the macroeconomic threats such as: credit booms, large private debt stocks composed mainly of lending in foreign currency, large current account deficits and external financial needs in these countries. In that way, it has opened the channels for the transmission of global crisis to these economies, by contributing to macroeconomic and financial vulnerabilities. As a consequence, the severe impact of the global financial crisis in last quarter of 2008 and first quarter of 2009 registered in European transition countries created significant falls in outputs in the majority of these countries (see Graph 1), with the sudden stops of bank lending flows, while the reversals have been prevented by a coordinated action of banks, local governments and international financial institutions[5]. Hand in hand with the strong output declines, most of the transition countries have also registered depreciation pressures on local currencies, and significant increase in risk[6]. The severe impact of the crisis has probably coincided or only turned attention to the accumulated macroeconomic imbalances in these countries. As a result, a shadow has been cast over their model of economic development[7] and

[2] European transition economies are referred as transition economies whose territory is in Europe in whole or in part as well as Turkey, and particularly those non-resource rich countries with tighter economic and financial links to the European Union. For more details see EBRD 2009, Chapter 3

[3] EBRD 2009, Chapter 3, p.61

[4] The financial integration has been particularly intensive in the period from 2005 to 2007, which coincided with a period of high global output growth, soaring commodity prices and abundant liquidity.

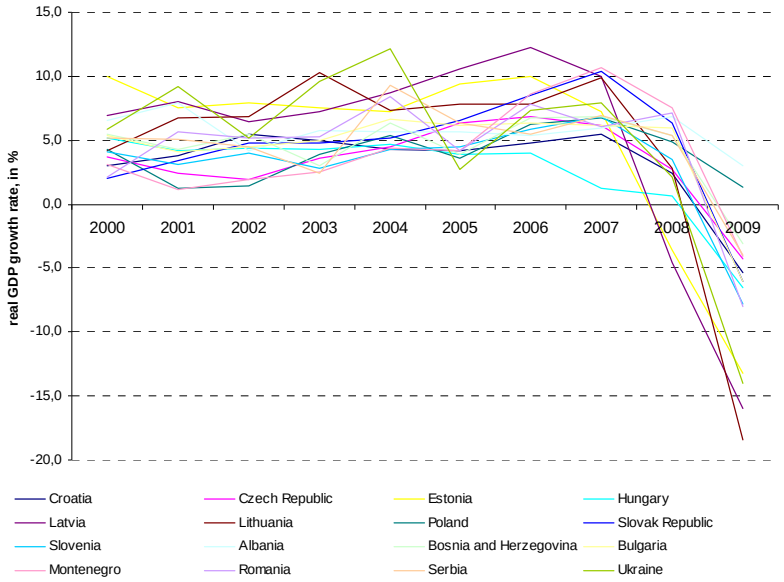
[5] The avoided severe impact of the crisis in the transition region has been considered as a proof of the benefits of political integration of these countries into a common European space, in parallel with is economic integration. For more details, see: Berglof et al. (2009)

[6] The NPL has risen between 1,5 times, as in Poland, and 5,5 times, as in Latvia.

[7] See EBRD 2009, Chapter 3, for more details.

some questions about its sustainability and the future drivers of development and economic growth in these countries have been raised.

Graph 1. Economic growth in transition countries : pre crisis expansion and crisis spillover in the region



Source : EBRD
Note : data for 2009 are EBRD estimations

Table 1. Financial integration and macroeconomic framework in European transition economies

	Average CAD, 2000-2008, in % of GDP	Foreign banks, end-2008, in % of total banking sector assets	External debt/GDP, end-2008, in %	Trade openness, (Exports+Imports)/GDP, end-2008, in %
Albania	*-8,9*	93,6	20,4	48,3
Armenia	*-7,3*	*50,5*	na	41,0
Belarus	*-3,8*	*20,6*	24,6	119,8
Bosnia and Herzegovina	*-15,8*	95,0	42,5	94,6
Bulgaria	*-11,8*	83,9	103,5	111,6
Croatia	*-5,9*	*90,8*	82,4	64,6
Czech Republic	*-4,2*	84,7	41,6	131,8
Estonia	*-10,9*	98,2	114,1	80,2
FYR Macedonia	*-6,1*	93,1	49,1	109,7
Georgia	*-10,9*	90,8	35,6	67,9
Hungary	*-7,6*	84,0	114,4	135,7
Kyrgyz Republic	*-1,3*	72,0	45,7	116,8
Latvia	*-12,3*	65,7	124,0	74,2
Lithuania	*-8,3*	92,1	68,9	112,5
Moldova	*-8,2*	31,6	67,9	106,4
Montenegro	*-15,7*	84,6	52,7	85,7
Poland	*-3,5*	76,5	46,2	72,0
Romania	*-8,4*	87,7	49,0	56,4
Serbia	*-8,6*	75,3	60,4	66,3
Slovak Republic	*-5,3*	99,2	53,3	147,6
Slovenia	*-2,3*	31,1	105,7	115,5
Ukraine	*2,5*	51,1	56,4	84,8

Source: EBRD

Table 2. Domestic and cross border lending in transition economies: a complement view

Country	Domestic loans, end-2008 (% of GDP) (1)	Cross-border loans, end-2008 (% of GDP) (2)	Total loans, end-2008 (% of GDP), (1)+(2) (3)	Nominal GDP in 2008 (in USD milions) (4)
Albania	35,3	24,5	59,8	12.964
Bosnia and Herzegovina	53,5	27,3	80,8	18.469
Bulgaria	74,5	62,1	136,6	51.989
Croatia	68,1	70,7	138,8	69.332
Czech Republic	51	17,5	68,5	216.354
Estonia	91,9	118,4	210,3	23.232
FRY Macedonia	43,9	16,9	60,8	9.569
Georgia	30,2	na	-	12.870
Hungary	67,6	65,5	133,1	155.930
Latvia	89,6	90,2	179,8	34.054
Lithuania	na	66,2	-	47.304
Montenegro	87,2	63,0	150,2	4.822
Poland	55	24,2	79,2	527.866
Romania	38,5	39,6	78,1	200.074
Serbia	39,7	30,9	70,6	50.061
Slovakia	44,7	na	-	95.404
Slovenia	85,6	na	-	54.639
Ukraine	79,8	22,8	102,6	179.604

Source: EBRD for column (1); BIS for column (2), IMF for column (4)

In this context, there is emerging recent empirical literature trying to explain the way how economic crisis from developed markets hit the transition European countries. Though still in front of a vast field for studying, the already published works point to the following main findings. The fact that financial integration with the developed markets did foster the economic growth in transition countries is reconfirmed by applying both the cross country[8] and sector approaches[9]. Another valuable finding in understanding the propagation of the crisis is that, on one hand, the most of the cross-country variation in output decline can be explained by a small group of macro vulnerabilities, above all, by the pre crisis credit boom and external debt accumulation (both driven by financial integration based on foreign banks entry)[10]. On the other hand, foreign banks were seen as stabilising factor during the crisis in some way mitigating the problem that they had caused, documented by the significant effect on lower capital outflows in countries with relative larger foreign bank presence[11]. Financial integration in transition economies has also been seen as problematic for two reasons: foreign financing and/or the presence of foreign banks seemed to play a role in the accumulation of a large share of foreign currency indexed lending in transition economies[12]. Also, high concentration of loans in some industries (as the construction industry), has been registered. Both developments were making these economies and their financial sectors even more vulnerable to foreign currency and systemic risk.

[8] EBRD (2009) and Abiad and al. (2009)

[9] By applying the methodology proposed by Rajan and Zingales (1998) consisting of verifying if the sectors with greater external financial needs grow faster with more intensive financial integration of the economy, the EBRD economists in EBRD (2009) have obtained positive results in contributing to the impact of financial integration to economic growth in a set of transition and emerging economies.

[10] Berlgof et al. (2009)

[11] Berglöf et al. 2009, de Haas and Llyveld (2010), Winkler (2009)

[12] See for example: Brown et al. (2009)

As a result of the presented recent set of studies, besides the overall general conclusion that despite the crisis in transition region, the transition itself is not in crisis[13], there are also some policy guidelines for dealing with the future development and macroeconomic balances in transition region. The first is that there is a critical need for policy action in dealing with high euroization and accompanying foreign currency risk. The second is to develop instruments to mitigate and better manage fast credit growth episodes in the future.

Both on the overall level of transition economies and on the country level, the policy recommendations suffer from a certain disproportion between the problem and the proposed directives for future action in resolving it. Moreover, the directives seem lacking the concreteness for translating them into policy actions. If we put more light on the recent literature on the issue, by taking the example of Serbia, as a representative case of a European transition economy, there is several recent policy papers on this issue. These studies contain thoroughly documented, general policy recommendations which were also raised before the crisis, such as: (1) To create conditions in the economy to push the productivity and competitiveness of the local economy mainly by improving business environment[14] in order to promote exports and obtain more balanced economic growth; (2) To put in place primarly structural reforms, improve infrastructure and education and face the macroeconomic challenges of improving general investment climate and increasing savings of households and companies as well as improving the efficiency of the public sector[15]; (3) To cope with mid term fiscal flows and risks in order to achieve the sustainable fiscal position[16]. One of the most concrete, but still opened recommendations to Serbian policy makers was to find a new trigger of economic growth, other than private sector credit boom as it was the case until the crisis, one of the possible triggers being the EU integrations[17]. However, the overall impression from this set of papers is that there is no clear enough vision or the consensus about the possible future radical improvement of the development model which is considered exhausted.

The problematic in defining the new sustainable pillars of economic growth in European transition economies and maintaining the macroeconomic stability remain certainly a vast and fruitful field for future economic research and policy actions. In the following paper, we aim to tackle this issue by offering a coherent view of mechanism which could in part explain the accumulation of macroeconomic imbalances prior to the economic crisis. The understanding of this possible mechanism could open the ways to deal with them in the future and keep employing the financial integration as the main driver of economic growth while main macroeconomic balances remain stable. We apply a microeconomic approach, by looking at enterprise level data and taking into consideration a sector of activity and its link to trade balance, as well as to access

[13] EBRD, 2009

[14] FREN (2009a), As particular measures, the author cite the following: increase the efficiency of public administration, making procedures more simple and more transparent, better implementation of antimonopoly policy; improve macroeconomic circumstances, improve infrastructure and education. FREN (2009) Quarterly monitor of economic trends and policies in Serbia nr.18, FREN, December 2009, Spotlight on nr.2, by Vasiljevic D, 'Economic growth and international competitiveness of Serbia, pp. 83-93

[15] FREN (2009b) FREN (2009)Quarterly monitor of economic trends and policies in Serbia nr.18, FREN, December 2009, Spotlight on nr.1, by Sestovic L. and Wes M, 'Ten years of transition: experience of economic growth – what follows?'

[16] FREN (2009c) FREN (2009) Quarterly monitor of economic trends and policies in Serbia nr.18, FREN, December 2009, Spotlight on nr. 3, by Lissovolik B. 'Current challenges for Serbia from the comparative perspective'

[17] The Transition report 2009 presentation speech by EBRD economist Peter Sanfey in Belgrade in December 2009.

to finance. Our explanation of the mechanism inherent to the financial integration of transition economies is inspired by the microeconomic theory of information asymmetry and the corporate finance theory. Some elements of the argumentation remain, however, not explored, and some are hard to deal with due to the data shortages. However, we believe that the presented view opens some reliable questions and directives for future research.

3. The sector distribution of growth and external financing: the case study of Serbia and some indications of the causes of structural imbalances

Until now, we have explained the main features of the macroeconomic setting and the role of the financial sector in it, before the crisis and through the crisis. We have considered credit booms, intensive capital inflows and increase in presence of foreign banks. However, if we summarize the enterprise level data on their perception of business environment in transition countries surveyed by EBRD and WB (BEEPS), we get, in some way, confusing statistics. Namely, despite the flood in lending to these economies, the companies in transition economies have revealed that 'the access to finance' had represented the second largest obstacle for their business activities (after tax rates),
Table 3.

Table 3. Most serious obstacle affecting the operation of this establishment?[1)]

	Percent
tax rates	15,15
access to finance	12,78
practices of competitors in the informal sector	11,66
political instability	11,49
inadequately educated workforce	10,49
corruption	5,66
don't know	5,30
does not apply	4,59
electricity	3,94
tax administration	3,80
labor regulations	3,43
business licensing and permits	2,46
access to land	2,20
courts	2,11
crime, theft and disorder	2,10
customs and trade regulations	1,79
transport	1,04
	100,00

Source: BEEPS
1) The summary of responses for 7 761 interviewed companies in 18 countries.

Moreover, by the mean of a simple descriptive analysis of Serbian economy, for which we are able to get the reliable data, we get the following three insights in the sectoral distribution of capital flows and economic growth. Firstly, almost 90% of the economic growth in the expansion period from 2002 to 2008, coupled by the intensive financial and trade integration was based on few services sectors (non-tradables): wholesale and retail trade, construction, transportation, communication and other services, while only about 10% of the economic growth refers to the

industry and agriculture (tradables), Table 4. Secondly, the pattern of external financing (bank loans) corresponds well to the previous pattern of growth distribution, Table 5. Though we do not dispose of the data on loan growth (first difference) by sector of activity in the corresponding period (2002-2008), we observe that about 70% of all loans received by enterprises in concentrated in the services sectors (corresponding to 80% of the economic growth) while only 30% of the stock of loans is placed to agriculture and industry. And finally, these sectors that were subject to extensive bank financing in the observed period, are those that registered the above average return rates, Table 5. There is no, however, a clear view about the causality direction between financing, growth and return in the observed statistical data.

Table 4. Distribution of gross value added across sectors of activity in Serbia: 2003-2008

	Contribution to GVA growth[1)]	Share in GVA growth	Share in total GVA in %
Agriculture, fishing and forestry	0,8	2,1	13,5
Minning	0,4	0,9	1,6
Manufacturing industry	2,7	7,2	17,1
Energy, gas and water	0,5	1,4	3,4
Construction	1,6	4,2	3,7
Retail and wholesale trade	10,4	27,4	11,3
Hotels and restaurants	-0,1	-0,2	0,9
Transport and communication	14,3	37,7	12,3
Financial intermediation	3,2	8,3	4,0
Other business activities[2)]	3,4	9,0	15,1
Other services	0,7	1,9	17,1
Total Gross value added	**38,0**	**100,0**	**100,0**

Source : Statistical bureau of the Republic of Serbia

1) Shares in 2002 used as weights.

2) Intelectual services, consulting, ingeneering design, renting and services related to real estate activities.

Table 5. Distribution of loans and profitability across sectors of activity of companies in Serbia, as of December 31 2008

	Loans		ROE in 2007	
	share in total	EUR mil		Relative[2)]
Agriculture, fishing and forestry	3,5%	790,4	1,8%	1,20
Minning	4,5%	998,8	-3,6%	-2,40
Manufacturing industry	28,4%	6.375,7	4,2%	2,80
Energy, gas and water	2,7%	596,5	-17,1%	-11,40
Construction	8,2%	1.831,6	8,9%	5,93
Retail and wholesale trade	23,8%	5.339,7	9,1%	6,07
Hotels and restaurants	1,2%	280,0	-4,5%	-3,00
Transport and communication	10,9%	2.454,2	2,9%	1,93
Financial intermediation	0,9%	196,7	12,7%	8,47
Other business activities[3)]	18,6%	4.163,2	10,8%	7,20
Other (public services)	0,8%	178,4	n.a.	n.a.
Total	100,0%	22.415	1,5%	1,00

Source: NBS, Solvency center, 'Report on the business results of companies prepared on the basis of submitted financial statements for 2008 and 2007'

1) On the basis of the financial statements submitted to the Solvency center in the National bank of Serbia (since 2010 operating within the Agency for business registries), being the legal obligation of companies. The aggregated data are based on 89934 enterprises (85% of registered 105748 enterprises) which fulfilled the legal obligation of submitting the valid financial statement.

2) Normalized with total average ROE in the economy

3) Intellectual services, consulting, architectural and engineering project offices, design, renting and services related to real estate activities.

4. Sectoral differences in access to finance: the empirical analysis of BEEPS dataset

The last three observations revealed in the previous section, lead us to make the following hypothesis about the mechanism inherent to the financial integration, and contributing to macroeconomic imbalances in the European transition economies. The incoming foreign banks that have intermediated (directly or via their local subsidiaries) the majority of capital inflows into these countries have been naturally faced with the problem of pricing the risk of their investment in transition economies. In order to determine the expected return of investment which is further accounted in lending interest rates in a form of a premium for different risks, the foreign banks as main investors were also facing an important information asymmetry problem.

The expected return on investment in emerging markets by a uninformed foreign investor is closely related to the sovereign rating of the country. Since there is no a perfect solution to price the risk of an investment in these economies with underdeveloped financial markets and scarce information, most of the recommended models for calculating the expected return (cost of capital) consist of including the risk premium for the country risk corresponding to the sovereign rating. Thus, the overall risk of the economy is assigned to all potential investments. Moreover,

additional premiums for specific sectors of the economy from developed markets are usually added to the risk free interest rate from developed markets[18].

This expected return translated into lending interest rates could induce the well known "lemon problem"[19] on the lending market where less risky (less profitable) borrowers get out from the market when they are offered an interest rate on external financing corresponding to the average risk. This interest rate is probably unbearable for enterprises in sectors of activity where periods of return of investment are longer and returns are lower, but more stable and less risky comparing to the overall country/market risk. It can be the case of the manufacturing industry in transition countries which accounts for the major part of exports at the same time. The previous mechanism, by driving the sectoral distribution of external financing, could thus represent a strong determinant of sectoral distribution of economic growth in transition economies as well as of important current account deficits across the region. For testing the existence of the mechanism, one should find the relationship between the access to finance and the sector of activity, as well as the link between the sector of activity and the risk in the transition region. In this paper we offer the first part of the argumentation.

In order to determine the relationship between the access to finance and the economic sector of activity, we proceed here with the empirical analysis of the enterprise level data from the Business Environment and Enterprise Performance Survey (BEEPS). The dataset consists of in total 29386 interviews of enterprises in 29 transition countries of Europe and CIS, in four turns (1999, 2002, 2005 and 2008/2009), always referring to fiscal year preceding the survey. The objective of the BEEPS survey was to obtain feedback from enterprises in the EBRD countries of operation on the state and private sector as well as to help build a reliable dataset which could help tracking changes in the business environment in these countries. It was collected on the basis of face-to-face interviews with owners, managers or finance officers via site visits by surveyors trained according to a standardized methodology. The survey contains very detailed questions on all important elements of enterprise characteristics, performances, as well as their perception of the business environment. The sample was structured to be representative for each country with specific quotas in terms of region, sector and enterprise size using the variable 'Total sales'. It does not include agriculture and mining as well as government departments (military, police, education, health) since there were no up to date and reliable statistics relating to that universe in the surveyed countries[20].

In line with the distinction of the European transition economies, which based their growth on financial integration unlike the resource rich countries, well documented in EBRD (2009), we take 18 out of 29 transition countries covered by the survey. We use the following criteria for taking country as a representative of 'the financial integration based economic development': (1) current account deficit (CAD) present all along the pre-crisis period, (2) ratio of domestic credit to GDP at the end-2008 superior to 30% and (3) significant foreign bank share (more than 50% of total banking sector assets). All these countries registered a significant stock of external debt at the end-2008 (from 50% of GDP to over 100% of GDP).

[18] Bancel F. and Perrotin T, 1999 ; Vernimmen 2006
[19] Akerlof, 1970
[20] For details see 'BEEPS 2008-2009, a report on methodology and observations'

Thus we obtain a homogenous set of countries that have followed the same "development model" based on financial integration and not based on resources exploitation and exports as in resource rich countries. Our final dataset consists of 6841 observations.

In order to test the determinants of the access to finance as an obstacle for companies operations in transition economies, we run the probit model, presented in the
Table 6 together with estimation results (marginal effects). Our dependent variable (LHS) is 'access to finance' dummy, which equals 1 if the firm responded that its major obstacle in the business environment is 'access to finance', and equal 0 if it was any other answer offered by the questionnaire (for descriptive statistics on this question see
Table 3). Alternatively, we rerun the same estimation with the dummy variable 'access to finance alt.' relating to the specific question on the degree of the obstacle access to finance (which includes availability and cost, interest rates, fees and collateral requirements). It equals 1 if the access to finance is qualified as 'major obstacle' or 'very severe obstacle' for establishment's current operations, and equal 0 for 'no obstacle' or 'minor obstacle' or 'moderate obstacle'. On the RHS, among the explanatory variables, our variable of interest is 'manufacturing' dummy corresponding to the question on the activity sector of the enterprise, as observed by the interviewer[21]. We control, however, for all reliable enterprise's characteristics available in the questionnaire which could impact its access to finance. Thus, on the RHS, we include the variable 'foreign ownership' for the share of foreign capital in total equity of the company, and the variable 'state ownership', as the share of government ownership in company's capital. We also control for the possible illiquidity of the company which could explain its access to finance, with the dummy variable 'overdue utilities or taxes' corresponding to the cases where companies have overdue payments for 90 days or more for utilities and taxes payments in the preceding year. We introduce the size dummies 'small' and 'large', thus obtaining the marginal effects to the access to finance of these two sizes relative to the medium one. We also control for the variables describing the share of company sales placed to foreign markets 'sales exported'. We verify in that way if the exporting companies benefit from an easier access to finance. We control for the pressures of the domestic competitors (variable 'domestic competition', foreign competitors ('foreign competition') and customers ('pressure customers') which represent the answers to the questions of the following type "How important is pressure from domestic competitors/foreign competitors/customers in affecting decisions to develop new products or services and markets?'. We control for the log of the establishment's age (variable 'ln(old)'), for the dummy 'have an account' representing the answer to the question "if the company has a checking account with a bank", and the dummy 'applied for a loan' "if the company has applied for a loan in a previous year". We introduce on the RHS the variable 'audited' as the dummy controlling for the fact that company's financial statements were audited in the previous fiscal year. We introduce 17 country dummies for taking account of country-specific effect on the access to finance.

By running the probit model, we obtain the evidence that the fact that an enterprise operates in manufacturing industry increases the probability that the enterprise faces the access to finance as its main business constraint by about 5 percentage points,
Table 6.

[21] There is often the discordance between the declared industry sector of a company and the factual industry sector of its core operations. It is convenient that the BEEPS includes the observed sector as a more objective data.

Table 6. Probit model : Estimation results

	Dependent variable: Access to finance	*Dependent variable: Access to finance alt*
	dPr[Access to finance=1]/dX	*dPr[Access to finance alt=1]/dX*
Explanatory variables		
Manufacturing	0.053***	0.040***
	(0.009)	(0.011)
Large	-0.16	-0.029**
	(0.011)	(0.014)
Small	0.029***	0.045***
	(0.010)	(0.012)
Sales exported	0.000	0.000
	(0.000)	(0.000)
Foreign capital	-0.001***	-0.001***
	(0.000)	(0.000)
State capital	0.001*	0.002***
	(0.000)	(0.001)
Overdue utilities or taxes	0.042**	0.142***
	(0.022)	(0.029)
Ln Old	0.002	0.002
	(0.005)	(0.006)
Apply for loan	0.066***	0.080***
	(0.009)	(0.011)
Have a loan	-0.036*	-0.039
	(0.022)	(0.027)
Purchased fixed assets	-0.015	0.010
	(0.009)	(0.012)
Pressure domestic competitors	0.007	0.056***
	(0.012)	(0.015)
Pressure foreign competitors	0.005	0.049***
	(0.012)	(0.016)
Pressure customers	-0.001	-0.003
	(0.012)	(0.015)
Audited	0.009	0.004
	(0.009)	(0.011)
Country dummies	Yes	Yes
Observations	6841	6841
Wald Chi2(31)	282.05	449.69
Prob > chi2	0.000	0.000
pseudo R^2	0.05	0.06

Notes: *, ** and *** represent 10, 5 and 1% significance, respectively. Standard errors are in parentheses.
Source: BEEPS; own calculations

On the other hand, a simple descriptive analysis of the dataset shows that the most of exporting companies operate in the manufacturing industry. One half of all manufacturing enterprises from the sample are exporters, while only one fourth (about 25%) of other enterprises operating in the services and construction sectors are exporters in the sense of our definition (any part of total sales exported abroad). If we restrict the definition of the exporter to 20% or more of total sales sold abroad, we obtain that about 30% of manufacturing and only 10% of non-manufacturing enterprises are exporters, Table 7. The weighted average of the share of 'total sales being exported' (total sales used as weights) across enterprises in the selected European transition region gives that manufacturing enterprises export 25% of their total sales, while non-manufacturing enterprises export only about 8%.

Table 7. Distribution of exporters across industries

	Exported any % of total sales	Exported at least 20% of total sales	Average % of sales exported (weighted by total sales)
Manufacturing	47,56	30,73	25,32
Non-manufacturing	21,96	10,64	8,49

Note: based on 17618 observations in 18 countries.
Source: BEEPS; own calculations

5. Discussion of results, conclusion and policy implications

In this paper, we gave only a tentative microeconomic explanation of the mechanism relating to financial integration and macroeconomic imbalances. Besides the strong intuition from the banking experience, we based our arguments only on our first results from a detailed empirical analysis of micro data from the BEEPS on the access to finance in European transition economies which conducted the financial integration based economic development model in the pre crisis period. By running a probit model, we obtain evidence that manufacturing enterprises face significantly greater problem of access to finance that services enterprises. We also saw, from the descriptive analysis of the same dataset, that enterprises that export are concentrated in manufacturing industry. Our interpretation of the underlying mechanism of such a difference in access to finance across sectors is based on the information asymmetry theory. Since the majority of loans are intermediated by foreign banks, as uninformed lenders, these banks account in their cost of capital a certain market risk with the help of sovereign ratings by international agencies. This risk, already evaluated as high, face some lenders from sectors with lower risk (and lower return rates being concentrated in the manufacturing industry) with discouraging costs of borrowing and lets them out of the lending market. This distortion in the lending market pushes then growth in sectors with higher returns (able to pay high interest rates). These are more likely the services sectors which participate significantly less than manufacturing sectors in overall country's exports. In that way, besides pushing growth, this mechanism also contributes to unsustainable levels of current account deficits in these countries, which, together with high levels of accumulated external debt, create high external financing needs of these countries, all three variables being strong determinants of country's risk perception by international rating agencies. Our explanation, however, relies on the hypothesis of the existing correlation between the level of risk and sector of activity in a manner that manufacturing industry enterprises are on average less risky that the non-manufacturing ones. We also build our arguments on the hypothesis that finance induces growth in transition economies, as evidenced by recent empirical studies. We are also aware of a need for deeper empirical analysis of few other aspects of our argumentation.

We have opened, however, in the presented paper some concrete insights which could generate specific policies aiming to help the problem of information asymmetry in pricing the lower risks in transition economies. If the proposed mechanism is in place in transition economies, it opens a new stream for future research. Moreover, it offers a valuable path for innovative policies solutions in transition countries which could help mitigate the accumulated macroeconomic imbalances and provide the environment for future economic development based on financial integration at the same time.

One of the possible solutions that naturally emerge would be the reconsidering of the role of the state in financial intermediation in these countries. We are all aware of the benefits of denationalization of the banking sector in transition economies and the withdrawal of the state from direct impact on lending through the monetary policy, as was the case before the transition was launched. Nevertheless, the idea of the state action in helping the access to finance of the private sector in developing countries is not novel or unconsidered. Yet, the recent empirical analysis and discussion papers are rather in favour of some kind of soft state intervention ('visible

hand') in form of rules and regulation which promote indirectly the access to finance of informationally opaque but valuable projects[22].

In our opinion, future policy actions in these countries should focus on two main fronts. One is to improve the general business environment (adequate infrastructure, energy stability etc.). The other is to commit to a long term (at least five to seven years) set of measures, aiming to help in correcting the structural imbalances of the economies. These measures could help in developing few strategic production sectors which are able to reduce current account deficit by exports or imports substitution. The state here has to find a systematic and transparent way to participate in the risk perceived by investors in these sectors. In that way, these sectors would benefit from new investments and external financing and finally register higher growth rates. It seems that, since the market itself is not able to provide a balanced model of economic growth, there is a place for active government involvement, but in a systematic and not discretionary manner. This kind of intervention could correct structural imbalances in transition economies, such as Serbia, where growth was based on foreign financial borrowing and concentrated in a few non tradable sectors as a consequence of market imperfections. Moreover, it is hard to expect in the near future to have another episode of abundant international liquidity as in the pre-crisis era.

[22] De la Torre et al. 2007

References:

Abiad, A. Leigh D. and Mody A, 2009, “Financial integration, capital mobility, and income convergence”, Economic Policy, Vol. 24, No. 4, pp.241-305

Akerlof, G. A, 1970. "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism," The Quarterly Journal of Economics, MIT Press, vol. 84(3), pages 488-500.

Bancel, F. and Perrotin T, 1999, “Le cout du capital dans les pays emergents”, Revue d’analyse financiere, no.119, pp. 76 - 88.

Bank for International Settlements, 2008, Annual Report, Basel, BIS

Berglof E, Korniyenko Y, Plekhanov A and Zettelmeyer J, 2009, “Understanding the crisis in emerging Europe”, EBRD Working Paper No.109

Brown M, Onega S. and Yesin, P, 2009, “Foreign currency borrowing by small firms”, Swiss National Bank Working Papers, 2009-2

De Haas, R. and Van Lelyveld, I, 2010, “Internal Capital Markets and Lening by Multinational Bank Subsidiaries”, Journal of Financial Intermediation, Vol. 19, pp.1-25

De la Torre, A. J.C. Gozzi and S. Schmukler, 2007, “Innovative Experiences in Access to Finance: Market Friendly Roles for the Visible Hand?” Policy Research Working Paper 4326, Washington DC, World Bank

EBRD, 2009, “BEEPS 2008-2009: A Report on Methodology and Observations”

EBRD, 2009, Transition report

FREN, 2009, Quarterly monitor of economic trends and policies in Serbia nr.18, FREN, December 2009, Spotlight on nr.2, by Vasiljevic D, ‘Economic growth and international competitiveness of Serbia, pp. 83-93

FREN, 2009, Quarterly monitor of economic trends and policies in Serbia nr.18, FREN, December 2009, Spotlight on nr.1, by Sestovic L. and Wes M, ‘Ten years of transition: experience of economic growth – what follows?’

FREN, 2009, Quarterly monitor of economic trends and policies in Serbia nr.18, FREN, December 2009, Spotlight on nr. 3, by Lissovolik B. ‘Current challenges for Serbia from the comparative perspective’

Levine, Ross, 1997, “Financial development and Economic Growth: Views and Agenda”, Journal of Economic Literature, June 1997, 35 (2), pp.688-726

Levine, Ross, 2004, “Finance and Growth: Theory and Evidence” (September 2004). NBER Working Paper No. W10766.

Robinson, J, 1952, “the generalization of the General Theory”, in *The rate of interest, and other essays*, London, Macmillan, pp.67-142

Schumpeter, J, 1912, “The Theory of Economic Development”, Leipzig, Danker&Humblot

Vernimmen, 2006, *Finance d’Enterprises*, Dalloz, Paris

Winkler A, 2009, “Southeastern Europe: Financial Deepening, Foreign Banks and Sudden Stops in Capital Flows”, in *Focus on European Economic Integration*, Q1/2009, OesterischeNatinalBank

World Bank, 2008, “Finance for All? Policies and Pitfalls in Expanding Access”, Washington DC