



IMF Working Paper

Bank Funding in Central, Eastern and South Eastern Europe Post Lehman: a “New Normal”?

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European Department

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Abstract

CESEE banks are reducing foreign funding sources in response to reduced external imbalances, reduced ability to tap international savings, banking group own strategies, initiatives by some regulators, and consistently with uncertainties surrounding the future of the banking union project. In the medium term, the global regulatory agenda and the high foreign presence and stock of FX loans exert opposite forces on rebalancing trends. In the long-term, any funding “new normal” will be determined by the future design of the EU financial architecture. In the meantime, limiting leverage, the use of FX loans and promoting aggregate saving through macro policies and capital market reforms will increase resilience against shocks going forward.

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I. INTRODUCTION

Many countries in Central Eastern and South Eastern Europe (CESEE)¹ have relied on foreign funding to fuel credit growth. Similarly to earlier crises in other emerging markets the internationally leveraged banking sector has amplified shocks associated with the sudden stop of capital inflows to the region after Lehman. To what extent did policies seeking rapid convergence with Western Europe contribute to the accumulation of imbalances? To what extent is the high foreign ownership of banking systems in the region to be blamed? Is rebalancing welcome or are there risks associated with it? What policies could be pursued to mitigate risks associated with current trends and reduce exposures to sudden stops in the future?²

This paper discusses possible microeconomic reasons³ for the higher reliance on foreign funding by banks in the region; it analyses factors exerting different pressures on current funding rebalancing trends; it highlights possible unintended consequences on rebalancing trends associated with the global regulatory agenda; and it suggests policy measures aimed at increasing the supply of local stable funding sources for banks and increase resilience of economies in the region from future shocks. It is argued here that the relationship between foreign ownership and foreign funding does not always seem to have the same sign across different areas and that the recent financial crisis has been reshaping the funding strategies of most international banks across Europe. While the consequences of this reshaping are still to be fully gauged, the regulatory environment is also under deep rethinking with potential further impacts on various banking systems across the European continent.

The remainder of the paper is structured as follows. Section II discusses the variability of foreign funding in the CESEE region and compares it to the recent the experience of various emerging market regions. Section III discusses possible rationales for the heterogeneous reliance on foreign funding in CESEE. Section IV discusses whether recent changes in funding patterns in the region are suggesting a new equilibrium (i.e., a “new normal”) for banks, and what forces are likely to shape such equilibrium in the long-term. Concluding remarks with policy priorities follow in Section V.

¹ We use the label “CESEE” in this paper to include: Albania, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech R., Estonia, Hungary, Latvia, Lithuania, Macedonia, Moldova, Montenegro, Poland, Romania, Serbia, Slovakia, Slovenia, and Ukraine. We exclude Turkey and Russia that have experienced different dynamics than most other countries in the region during the crisis and Kosovo, due to lack of data.

² The importance of foreign funding in the region is such that the Vienna initiative has recently started monitoring patterns on a quarterly basis (<http://vienna-initiative.com>).

³ This paper focuses on few micro determinants of gross parent funding of subsidiaries in the CESEE region and it is intended to complement the vast literature on the role of bank foreign ownership and the more macroeconomic literature on push and pull factors of capital inflows of which, bank foreign funding is only a component.

II. FOREIGN FUNDING IN CESEE DURING THE CRISIS

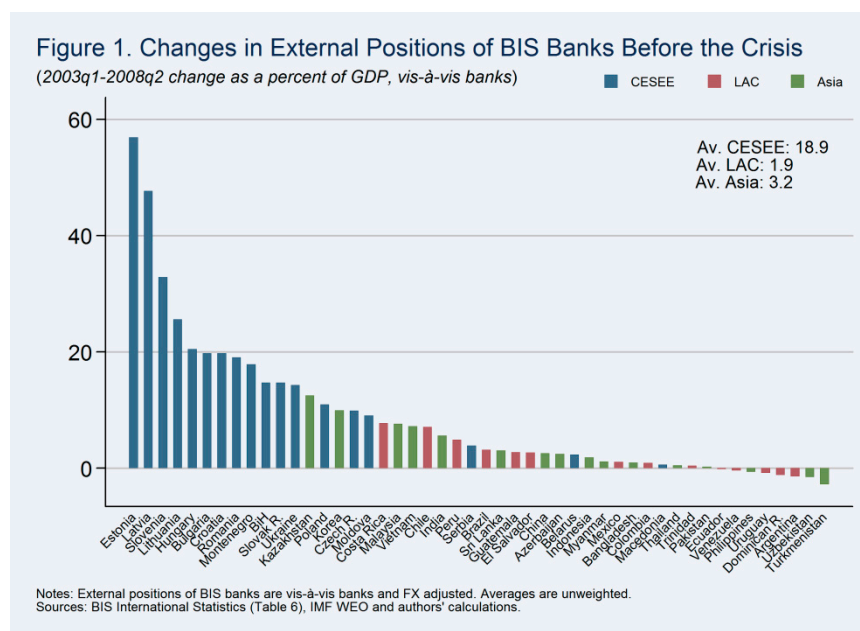
For most, but not all, countries in the CESEE region, the period before the crisis was characterized by strong domestic demand.⁴ Countries naturally sought rapid convergence with the West and, initially, total factor productivity growth made a very significant contribution to gross domestic product (GDP) growth. However, over time, the importance of private consumption and, to a lesser extent, gross fixed capital formation, tended to increase resulting in increasingly smaller contribution of net exports. Within this general picture, Gardó and Martin (2010) point to important differences among the various CESEE countries. Until 2008, net exports had an increasingly negative impact on growth in the “fixed” exchange rate countries (except Croatia) and in Romania, whereas private consumption tended to make a positive contribution in almost all CESEE countries (except Hungary and Croatia). A broadly similar pattern can be observed for investment, although the pattern in many CESEE countries is less pronounced than for private consumption.

The resulting high demand for credit was funded by high capital inflows, especially in countries with non flexible exchange rates. A credible fixed exchange rate regime encourages higher capital inflows and FX credit for various reasons (Magud *et al.* 2011). For instance, a credible fixed exchange rate regime limits the policy response needed to curb the monetary expansion associated (for instance, due to partial sterilization of FX purchases) with large inflows. In addition, banks’ demand for FX liabilities increases as improperly priced implicit guarantees can be extended to FX claims (for instance, deposit guarantees and a peg can be perceived as a guarantee to FX claims associated with capital inflows). Moreover, banks’ supply of FX loans is encouraged as this reduces currencies mismatches. Finally, demand for FX loans also increases as, with a peg, (lower) FX interest rates tend to be deflated (erroneously) by expected domestic inflation and wage growth.

Rapid capital inflows resulted in a strong increase in external debt levels, especially in the form of bank intercompany loans. During the period 2003q1-08q2, external positions of BIS reporting banks⁵ vis-à-vis banks in the region increased, as a share of GDP, on average by about 20 percentage points with exposures to Estonia and Latvia increasing by more than 50 and 40 percentage points, respectively (Figure 1).

⁴ It is beyond the scope of this paper to discuss the recent sudden stop event of the CESEE region. Useful treatments can be found in Bakker and Klingen (2012), Coccozza *et al.* (2011), Gardó and Martin (2010), and paper there referenced. In addition, IMF (2013) provides a positive analysis of the role of foreign banks and funding in fostering economic growth before and during the crisis, as well as more normative analysis of key structural factors shaping the evolving banking business model in the region.

⁵ External positions of BIS reporting banks measure gross international claims of bank offices in the respective reporting countries, including inter-office positions, on the bank and/or non-bank sectors of host countries. For the purpose of this paper we prefer gross external positions vis-à-vis banks as a measure cross border exposures of parents to affiliates because they include inter-office positions. Consolidated statistics are another measure often used to capture cross border funding/exposures. However, always for the purpose of this paper, this measure has the disadvantages of netting out inter-office positions and being affected by the intensity with which affiliates use domestic funding to extend credit.



Consequently, banks' foreign funding levels were very high on the eve of the crisis.⁶ As of 2008q2, external positions of BIS reporting banks vis-à-vis banks in the region averaged 24 percent of banking sector assets with exposures to Croatia, Estonia, Hungary, Latvia, Lithuania, Romania, and Slovenia exceeding 30 percent of respective banking sector assets (Figure 2).

In other emerging market regions, foreign funding increased to much lower levels (Figures 1 and 2). In the period between 2003q1-08q2, external positions of BIS reporting banks vis-à-vis local banks in Latin America⁷ and Asia⁸ increased, as a share of GDP, on average by 2

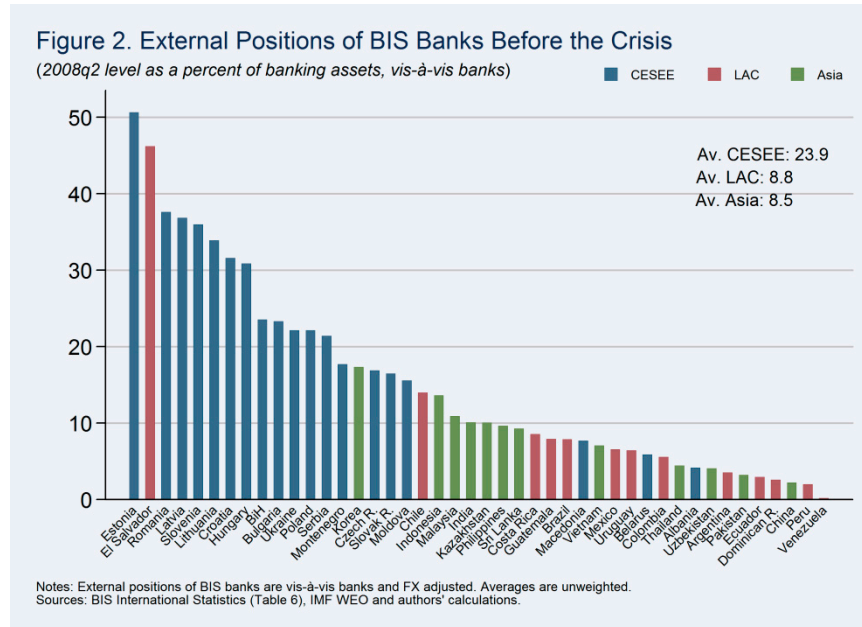
⁶ We look exclusively at gross liabilities as we believe that net foreign flows are not directly relevant for credit intermediation. Developments in net capital flows during the financial crisis confirm that they do not capture the severe disruption in cross-border interbank lending nor do they correctly predict the source of strains: net capital flows narrowed only slightly in 2008; by contrast, gross capital flows collapsed, driven predominantly by retrenchment in flows among advanced economies. This suggests that the stock of foreign liabilities and what Borio and Disyatat (2011) and Shin (2012) call (maybe using different terms) “excess elasticity” of gross flows is more relevant to monitor exposures and “cliff” effects associated with sudden stops.

⁷ We use the label “Latin America” in this paper to include the following countries: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Mexico, Paraguay, Peru, Trinidad and Tobago, Uruguay and Venezuela. These countries were chosen by reporting the largest levels of external positions by BIS reporting countries for their region. Few small islands in the Caribbean were excluded either due to lack of other data or due to their offshore status.

⁸ We use the label “Asia” in this paper to include the following countries: Azerbaijan, Bangladesh, China, India, Indonesia, Kazakhstan, Malaysia, Pakistan, Philippines, South Korea, Sri Lanka, Thailand, Uzbekistan and Vietnam. These countries were chosen by reporting the largest levels of external positions (at least

(continued...)

and 3 percentage points, respectively. Only nine countries witnessed much higher increases than these averages with the highest increases taking place in Kazakhstan (12 percent), Korea (10 percent), Malaysia and Costa Rica (8 percent). Consequently, foreign funding levels were on average much lower on the eve of the crisis in Latin America and Asia with the highest levels of exposures as a percentage of total banking sector assets being recorded in El Salvador (45 percent), Korea (18 percent), Chile and Indonesia (12 percent), and Malaysia and India (10 percent).



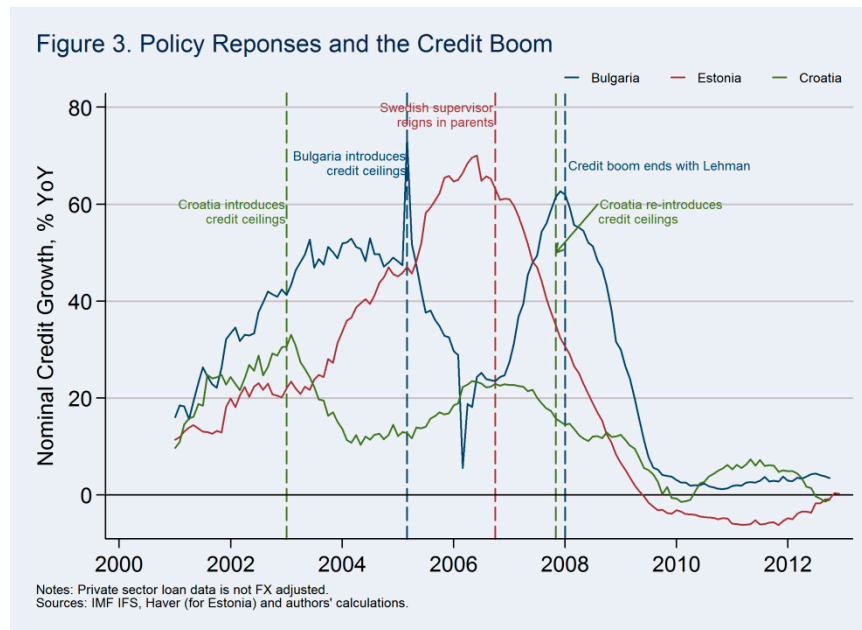
Strong aggregate demand fuelled by capital inflows in CESEE led to rapid growth but also to rising internal and external imbalances. Strong capital inflows resulted in rapid credit growth that exceeded 50 percent YoY for many countries before the crisis. However, with rapidly closing output gaps, economies started overheating: i.e., labor market tightened and wage growth increased, resulting in a rapid increase in headline inflation and in an asset price bubble in many countries. At the same time, large external imbalances (in the form of current account deficits) developed and growth became unbalanced in many countries with a large shift of resources from the tradable to the non tradable sector sustained by FDI inflows largely directed to the non tradable sector.

Countries used a combination of monetary, supervisory and macro prudential measures to stem capital inflows and resulting high credit growth⁹ but policies were largely ineffective at

USD1 trillion) by BIS reporting banks for their region. Brunei, Georgia, Marshall Islands, New Caledonia, Papua New Guinea, French Polynesia, and Taiwan were excluded due to lack of data.

⁹ See ESRB (2011), IMF (2011 and associated background papers), IMF (2012a), Lim *et al.* (2011) and Vandebussche *et al.* (2012) for surveys of measures adopted by CESEE countries and a discussion on the effectiveness of measures used to contain FX lending.

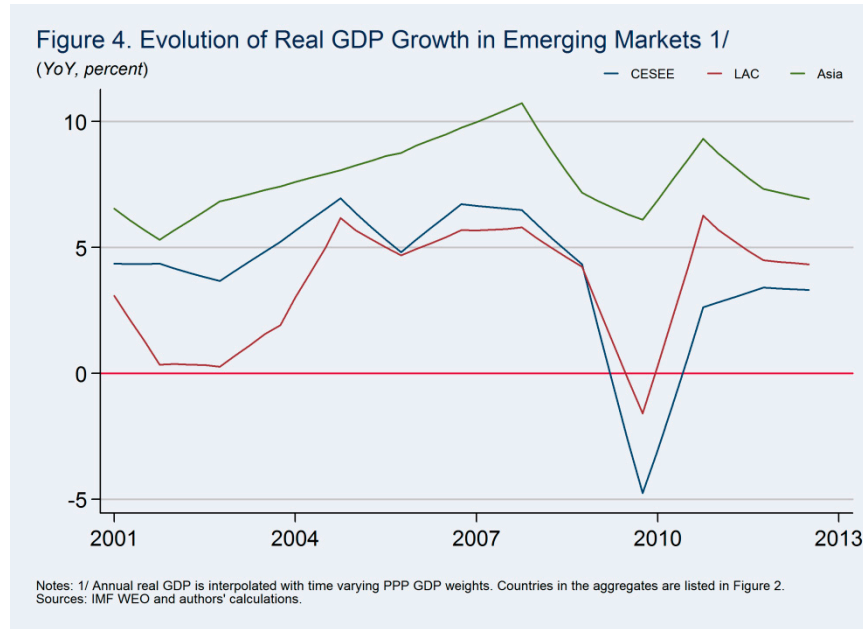
containing overheating (Figure 3). In terms of policy response, countries fall essentially in three categories. Countries like Estonia adopted more *laissez faire* approaches. Countries like the Czech Republic, Poland, Romania and Slovakia responded using orthodox policies like letting their exchange rate appreciate and experienced smaller and shorter credit expansion. Countries like Bulgaria and Croatia adopted active and often unorthodox policy measures. Countries like Estonia saw their nominal credit growth increase from 20 to 70 percent YoY until the Swedish supervisor started reigning in parent funding in essentially all the Baltic countries. Credit controls in Bulgaria were very effective initially but parent banks quickly found the way to circumvent administrative measures by resorting to cross border lending directly to the real sector or lending to non bank affiliates and controls were lifted in 2007. Credit controls in Croatia in 2003 and 2007 appear instead to have curbed credit growth (which nonetheless averaged a high 20 percent YoY over the period).¹⁰



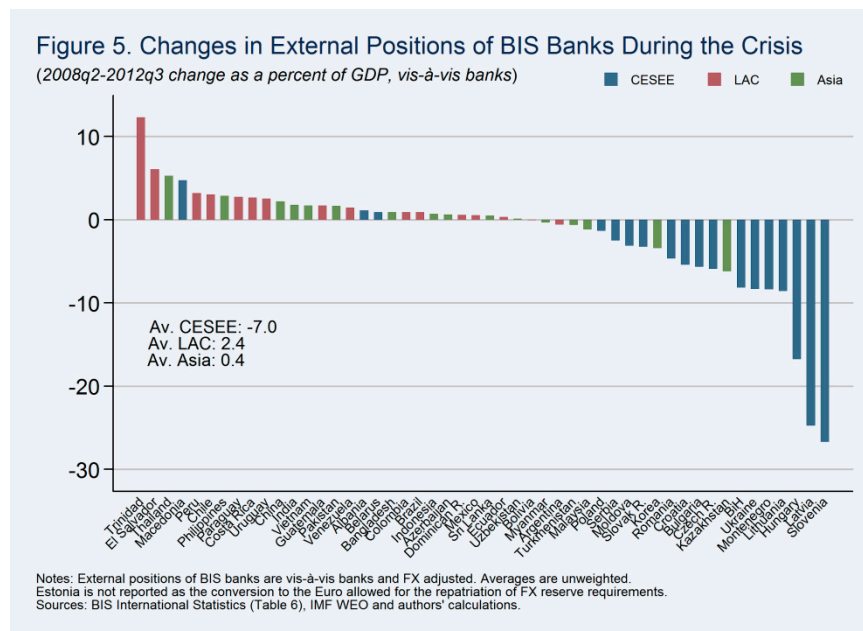
With imbalances lower in Latin America and Asia, GDP growth contracted the most in CESEE during the crisis. Real GDP growth decreased in all markets but not as much as in CESEE. Figure 4 shows how real GDP growth in CESEE decreased from positive 6 percent to negative 5 percent during the 2008-09 period. The Latin American region was also affected but not in the same magnitude and real GDP growth decreased from positive 6 percent to negative 1 percent. Finally, Asia was the least affected of these three regions: over the same period, real GDP decelerated from 11 percent to 6 percent average growth.¹¹

¹⁰ Figure 3 underestimates the large amount of cross border lending that takes place in Croatia and therefore, overestimates the impact that controls had on overheating.

¹¹ Feldkircher (2012) conducts a comparative analysis of 95 initial macro and financial conditions that could explain real GDP downturn during the crisis and conclude that the higher GDP growth fuelled by domestic credit ex ante, the higher the real contraction ex post.



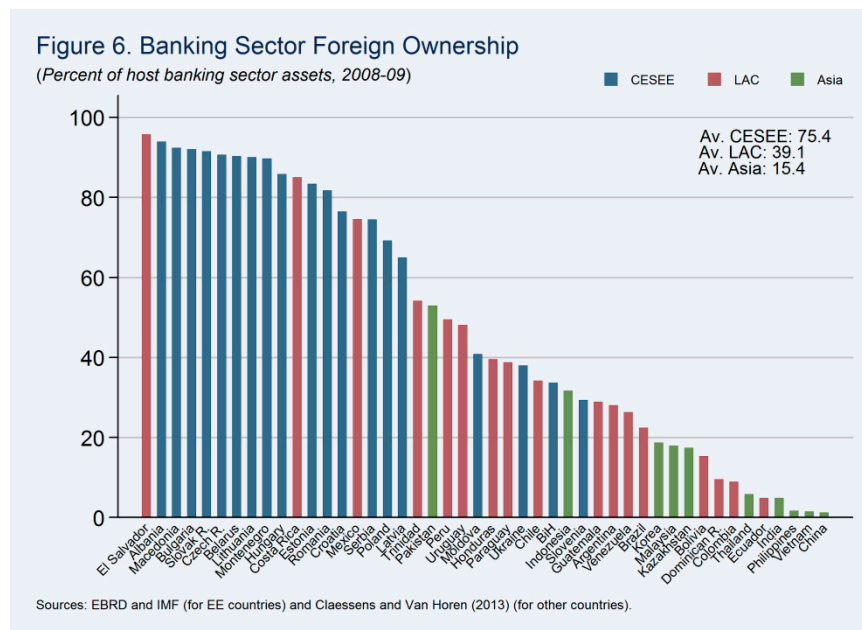
Between 2008 and 2012, Latin America and Asia experienced a much smaller contraction in foreign funding. During the period between 2008q2 and 2012q3 the share of external positions of BIS reporting banks to CESEE country GDP contracted by 7 percentage points on average. At one extreme, gross foreign claims on Slovenian and Latvian banks contracted by 24 and 22 percentage points of GDP, respectively while countries in other regions fared much better (Figure 5).



The relationship between aggregate demand and capital inflows is not the only relationship explaining cross country (and regional) heterogeneity in growth performance. The performance of the export sector is also important to explain this difference. For instance, part of the initial drop in GDP growth and subsequent rapid recovery in Latin America was also due to export price volatility with foreign funding playing a smaller role than in the CESEE region (for a more general discussion of principal factors explaining the success of Latin American countries in weathering the recent crisis, see Kamil and Rai (2010) and De Gregorio (2012)). But even in CESEE, trade has been important. For instance, Rahman and Zhao (2013) explain how contraction in CESEE also reflected: (i) the high trade integration between Central Europe and the Baltic countries with Western Europe and (ii) the increasing importance of cross border supply chains in European exports with foreign value added accounting for more than 50 percent of exports of countries like the Czech Republic, Hungary, Lithuania, and Slovakia.

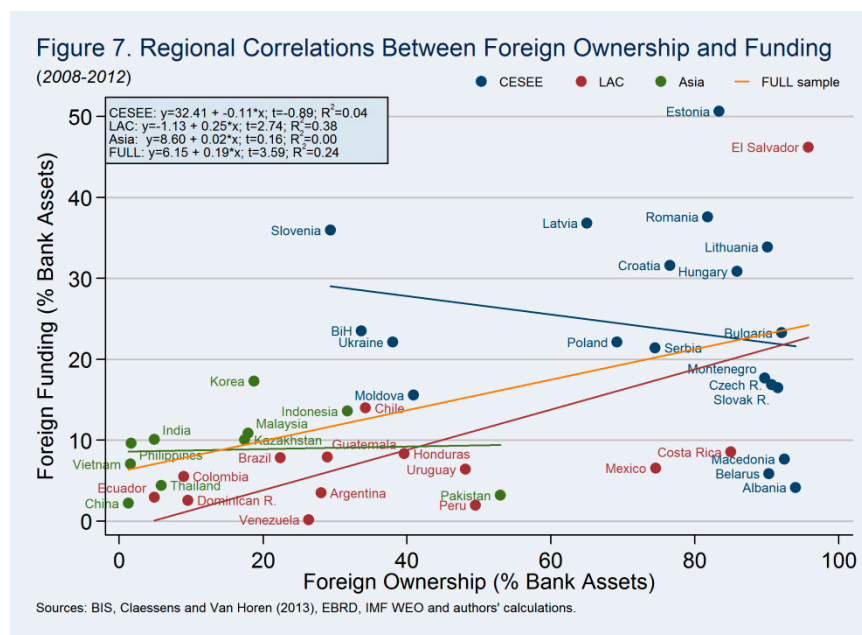
III. WHY IS FOREIGN FUNDING IN CESEE SO HIGH?

One reason for high funding is high foreign ownership. In general, foreign ownership in the CESEE region is high (Figure 8). Foreign banks in CESEE own on average 75 percent of banking sector assets compared with 39 and 15 percent in Latin America and Asia, respectively.¹² With few exceptions in Latin America, the degree of foreign ownership in these two regions is comparable to the middle-to-low end of the distribution of foreign ownership in CESEE countries.



¹² Altmann (2006) contains a very good discussion on the history of foreign banks' involvement in CESEE.

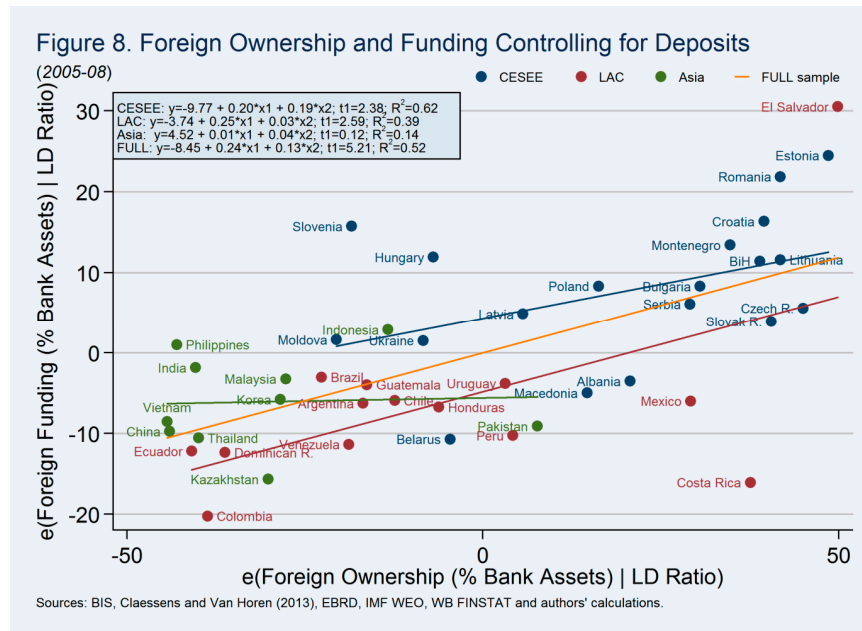
At the same time, foreign funding and ownership are less than perfectly correlated, suggesting that, without controlling for relevant factors, high foreign presence could be compatible with low foreign funding (Figure 7). For instance, foreign funding and ownership are positively correlated in Latin America.¹³ In this region, countries like Ecuador have both low foreign funding and ownership while countries like El Salvador or Costa Rica have high foreign funding and ownership; typical of small open economies with embryonic financial sectors. At the same time, Chile and Argentina have very similar levels of foreign control but foreign funding in Chile is 4 to 5 times higher than in Argentina. However, the correlation is not statistically different from zero in CESEE and Asia: many CESEE countries have large foreign ownership and very heterogeneous levels of foreign funding while Asian countries have all low levels of foreign funding but very heterogeneous foreign presence.



However, the relationship between foreign presence and funding becomes statistically significant also at the subregional level (with the exception of Asia) if we control for the deposit base used to fund loans during the build up to the crisis. Countries in CESEE with a low deposit base (like Bosnia, Croatia, the Baltics, Hungary Romania, Serbia, Slovenia, and Ukraine) all had higher levels of foreign funding while countries with an adequate deposit base (like Albania, Czech R., Macedonia, Poland, and Slovakia) had a much lower level of foreign funding. After controlling for the heterogeneity in the deposit base within the CESEE region, foreign ownership is again positively correlated with foreign funding as shown in Figure 8. This reports a statistically positive marginal impact of foreign ownership on foreign funding for CESEE, Latin America and the full sample of our emerging markets but not for Asia, after controlling for the average loan to deposit ratio in the 2005-07 period. The results

¹³ The correlation is statistically different from zero even when El Salvador is excluded from the sample.

suggest that, other things equal, countries with lower domestic saving are more likely to have larger capital inflows the higher is the foreign presence in their banking sector.¹⁴ Consequently, limiting banking sector leverage¹⁵ by promoting the growth of aggregate savings through macroeconomic policies that do not lead to internal and external imbalances and through the development of domestic capital markets are likely to increase economic resilience from external shocks.



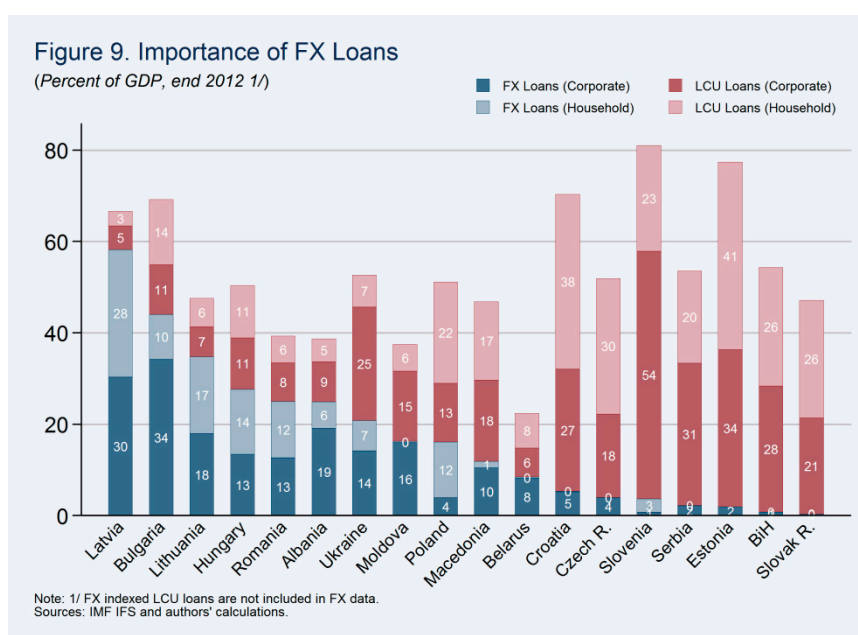
The expansion of FX loans is an additional explanation for high foreign funding in specific countries. On the one hand, FX loans in CESEE were partly supply-driven¹⁶ with foreign banks exploiting cheaper international funding sources and domestic banks tapping the FX swap market to issue loans matching the currency structure of their funding liabilities. The international funding advantage was, in turn, caused by the scarcity of longer maturity currency debt instruments in the region that could have been used as pricing benchmarks. In addition, the high costs of securitization for domestic currency instruments also contributed to interest rate differentials. Finally, the high expectation of short term euro adoption

¹⁴ The positive marginal impact of foreign ownership on funding is also negatively affected by the level of domestic saving suggesting that foreign ownership is more important to attract foreign funding in countries with low domestic savings than in countries with high domestic savings. However, this non linearity is not statistically different from zero.

¹⁵ Incidentally, as discussed later in the paper, this is exactly in line with the initiatives taken by several international active groups in the region and by the Austrian supervisor in the aftermath of the crisis.

¹⁶ Brown *et al.* (2010) find that at least one third of FX loans in Bulgaria was initially requested in local currency by borrowers before banks convinced them to borrow in FX instead.

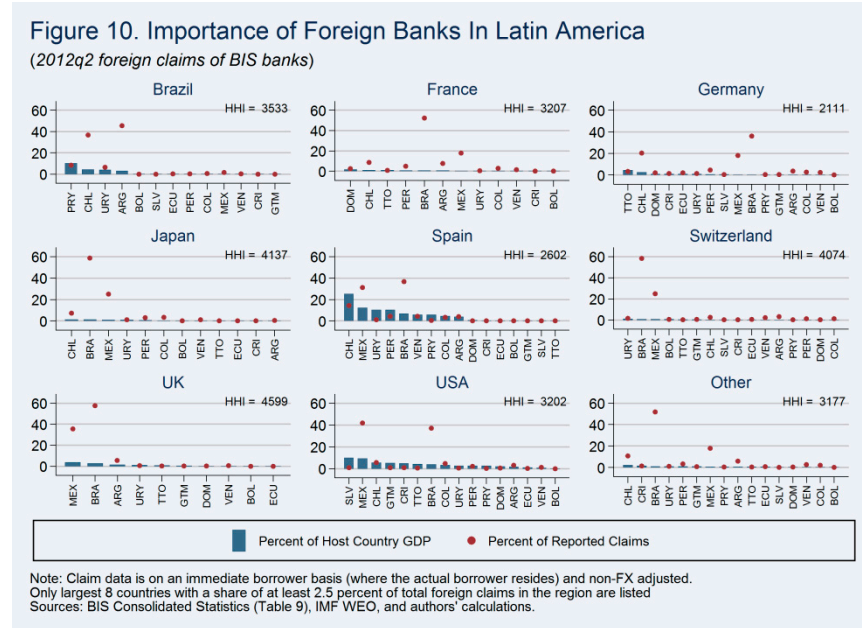
contributed to a generalized under pricing of risks, especially exchange rate risk (for either the lender or the borrower) in fixed or pegged exchange rate countries. On the other hand, demand for FX loans was also high for similar reasons, especially as a consequence of mispricing of risk by unhedged borrowers. As a result, a large share of FX denominated loans accumulated in many countries. For instance, Figure 9 shows how at the end of 2012, FX loans amounted to more than 20 percent of GDP in countries like Latvia, Bulgaria, Lithuania, Hungary, Albania, Romania and Ukraine. In addition, FX loans account for more than 50 percent of private sector loans in countries like Albania, Bulgaria, Hungary Latvia, Lithuania, and Romania. Finally, some countries have substantial FX-indexed loans (not shown on the figure)—for example, FX-indexed loans in Serbia amounted to 65 percent of private sector loans.



Another factor explaining the high level of foreign funding in the CESEE region is related to the centralized funding model of internationally active banking groups operating there. This is in contrast of groups operating in Latin America. There Spanish groups (the largest set of foreign banks in terms of outstanding foreign claims,¹⁷ followed by US and Brazilian banks (Figure 10)), operate with a decentralized subsidiary model characterized by a high degree of financial independence (including capital, liquidity and funding). This strategy is in line with

¹⁷ Foreign claims of BIS reporting banks measure worldwide consolidated claims of banks chartered in the respective reporting countries, including claims of own foreign offices but excluding inter-office positions, on all sectors of host countries. These include: international claims (i.e., the sum of cross border claims and local claims of foreign affiliates in foreign currency) and local claims of foreign affiliates in local currency. As explained in footnote 5, we prefer locational statistics to show the importance of foreign funding. However, these are not publicly available on a bilateral basis. Hence, in order to show the country origin of funding, we resort to using consolidated statistics.

their international banking model which possibly sacrifices economies of scale and efficiency of funding and liquidity management but minimizes within group contagion.

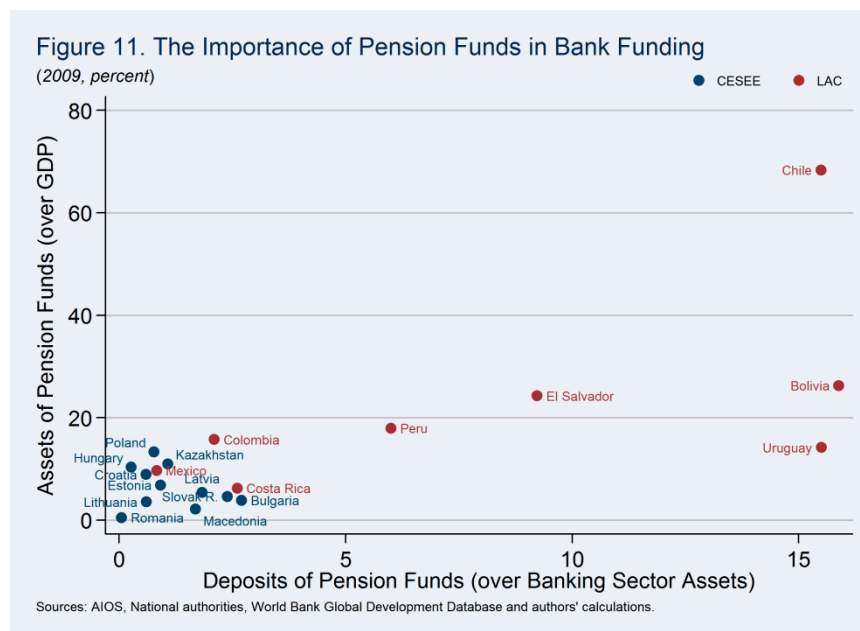


The decentralized model of Spanish groups is in part the result of lessons learned during previous crises. Earlier crises in Latin America and Asia were also characterized by internationally leveraged banking sectors and short duration of liabilities (Mishkin 1999). Back then, countries experienced sharp corrections in asset prices and GDP growth when external funds were cut. However, Latin America had learned from those crises and by 2008, it had reduced its reliance on foreign funding (Figure 2).

But decentralization was also actively promoted by the home supervisor. Home country regulators in Spain were critical in promoting funding, liquidity and capital autonomy at the level of foreign affiliates. In the early 2000s, the Bank of Spain issued a framework of good practices for the organization and supervision of Spanish banking based on guiding principles in terms of transparency and clarity with regard to the structure of the group, financial autonomy (including funding) and control of liquidity. The framework stipulates that each subsidiary must be financially independent from the parent and from other institutions in the group (BIS 2010).

Simultaneously, Latin American countries supported the autonomy of subsidiaries by developing the supply of long term finance. Many countries in Latin America managed to develop the supply of long term finance by reforming their pension systems and promoting the development of life insurance and mutual fund industry. This has generated an increase in the supply of stable and long term domestic funding for banks. Figure 11 reports the importance of pension funds in total banking sector assets and in the economy of CESEE and Latin American countries. Latin American pension funds in 2009 had direct holdings of

banking sector securities equivalent to USD87 billion¹⁸ which compares much more favorably with the importance of pension funds in bank funding in the CESEE region.



In addition, capital market policies in Latin America also focused on the development of local debt and equity markets. These policies fostered regional integration initiatives and debt management practices aimed at lengthening the yield curve and diversifying debt issuance into, *inter alia*, inflation indexed debt. In this way, they allowed banks to increase their reliance on local sources of financing, including deposits and, in some cases, bonds and other capital market securities.

Incidentally, these policies made economies more resilient to external shocks. These policies lengthened the duration of corporate funding sources while providing banks with stable and long term source of domestic finance which, in turn, allowed banks to reduce the maturity mismatch between assets and liabilities. At the same time, complemented by strong regulations on currency mismatches (IADB 2005), they allowed central banks to have more flexibility in the management of the exchange rates during the crisis without the risk of jeopardizing the stability of the banking system. In other words, economic resilience to external shocks and foreign exchange flexibility were supported by the development of the domestic capital markets.¹⁹

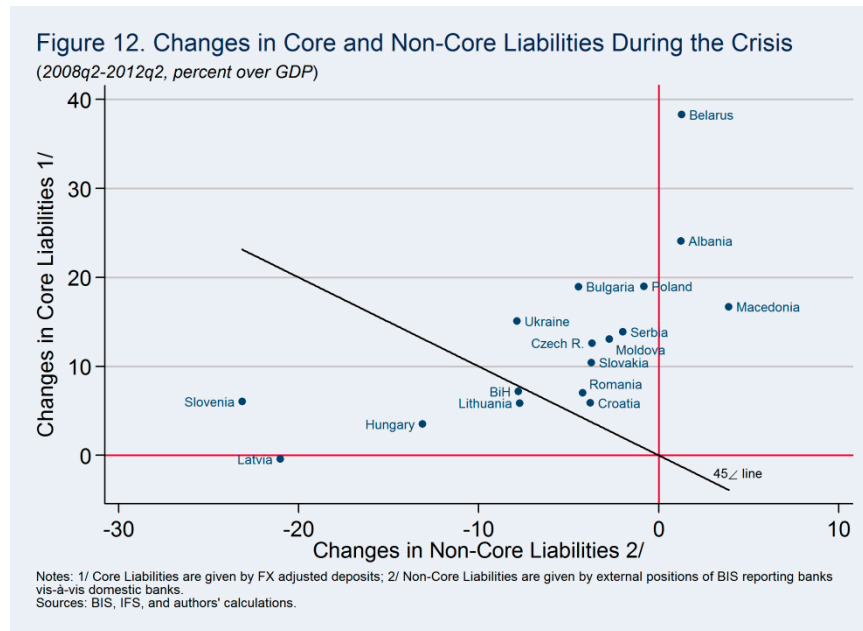
¹⁸ It includes open pension funds of Bolivia, Chile, Costa Rica, Colombia, El Salvador, Mexico, Peru, Dominican Republic, and Uruguay.

¹⁹ To our knowledge, the importance of capital market development for CESEE was first highlighted by Impavido and Lankes (1996). See also Impavido *et al.* (2001 and 2002) for a discussion of the complementary relationship between institutional investors on the one hand, and firms' and banks' efficiency and resilience, on the other hand.

IV. ARE RECENT TRENDS SUGGESTING A “NEW NORMAL” FOR FUNDING IN CESEE?

A. Recent funding trends

Since the onset of the global financial crisis, the CESEE region has seen a large decline in capital inflows. In most countries, current account deficits are now low or very low. Economies are no longer overheating and a rebalancing of growth has taken place from internal demand towards net exports. In addition, the global regulatory agenda and the need to strengthen balance sheets are prompting banks in the West to reduce the risk weight of their assets, resulting in lower exposures to the East. Hence, higher domestic saving in the East and higher capital and liquidity needs in the West are reducing the availability of, and the need for, capital inflows. External positions of BIS reporting banks are now some 18 percent lower than the peak before the crisis with the retrenchment taking place mostly in exposures to banks, rather than non-banks. Notwithstanding the large drop in foreign funding, domestic banks have largely managed to compensate for the liquidity shortage with domestic deposits. There are exceptions, though. Countries like Bosnia, Hungary, Latvia, Lithuania, and Slovenia were unable to compensate with likely negative impact on domestic credit (Figure 12).



Foreign groups continue to be systemically important for host jurisdictions. A small set of players, systematically controls the largest three banks in any given country (Table 1). Here, with the exception of the Hungarian OTP, we find the Greek group National Bank of Greece; Austrian groups, like Erste and Raiffeisen; Italian groups, like UniCredito and Intesa Sanpaolo; Swedish groups, like Swedbank and SEB; the Belgian KBC; French groups, like BNP Paribas and Société Générale and the German groups like Bayerische and Commerzbank.

Table 1. Foreign Control of Largest Banks (2011, percent of total assets)

Subsidiary				Parent	
Country	Bank Name	Mkt Share	Rank	Country	Bank Name
Albania	Raiffeisen Bank Albania	29.6	1	Austria	Raiffeisen - RZB
	Intesa Sanpaolo	11.8	3	Italy	Intesa Sanpaolo
BiH	Raiffeisen Bank Bosnia	21.7	1	Austria	Raiffeisen - RZB
	UniCredit	19.1	2	Italy	UniCredit
	Hypo Alpe-Adria-Bank	7.8	3	Austria	Hypo Alpe-Adria
Bulgaria	UniCredit	17.0	1	Italy	UniCredit
	DSK Bank	12.1	2	Hungary	OTP
	UBB	9.5	3	Greece	NBG
Croatia	Zagrebacka Bank	27.1	1	Italy	UniCredit
	Privredna Banka Zagreb	16.8	2	Italy	Intesa Sanpaolo
	Erste & Steiermärkische Bank	14.3	3	Austria	Erste
Czech R.	CSO	22.3	1	Belgium	KBC
	Ceska Sporitelna	21.3	2	Austria	Erste
	Komerčni Banka	18.0	3	France	Société Générale
Estonia	SwedBank	61.8	1	Sweden	Swedbank
	SEB	28.7	2	Sweden	SEB
Hungary	Erste Bank	10.2	2	Austria	Erste
	MKB Bank	9.2	3	Germany	Bayerische
Latvia	SwedBank	20.8	1	Sweden	Swedbank
	SEB	15.7	2	Sweden	SEB
Lithuania	AB SEB Bankas	36.8	1	Sweden	SEB
	SwedBank	26.7	2	Sweden	Swedbank
	AB DNB Bankas	15.5	3	Norway	DNB Bank ASA
Macedonia	Stopanska Banka	22.8	2	Greece	NBG
	NLB Tutunska Banka	19.9	3	Slovenia	NLB
Montenegro	Crnogorsko	31.5	1	Hungary	OTP
	SocGen Montenegro	12.8	3	France	Société Générale
Poland	Bank Polska Kasa Opieki	13.8	2	Italy	UniCredit
	BRE Bank	9.3	3	Germany	Commerzbank
Romania	Banca Comerciala Romana	23.8	1	Austria	Erste
	DNB SocGen	15.5	2	France	Société Générale
Serbia	Banca Intesa ad Beograd	15.5	1	Italy	Intesa Sanpaolo
	UniCredit	7.8	3	Italy	UniCredit
Slovak R.	Slovenska Sporitelna	21.3	1	Austria	Erste
	Vseobecna Uverova Bank	20.9	2	Italy	Intesa Sanpaolo
	Tatra Banka	17.2	3	Austria	Raiffeisen - RZB
Ukraine	Raiffeisen Bank Aval	7.1	3	Austria	Raiffeisen - RZB

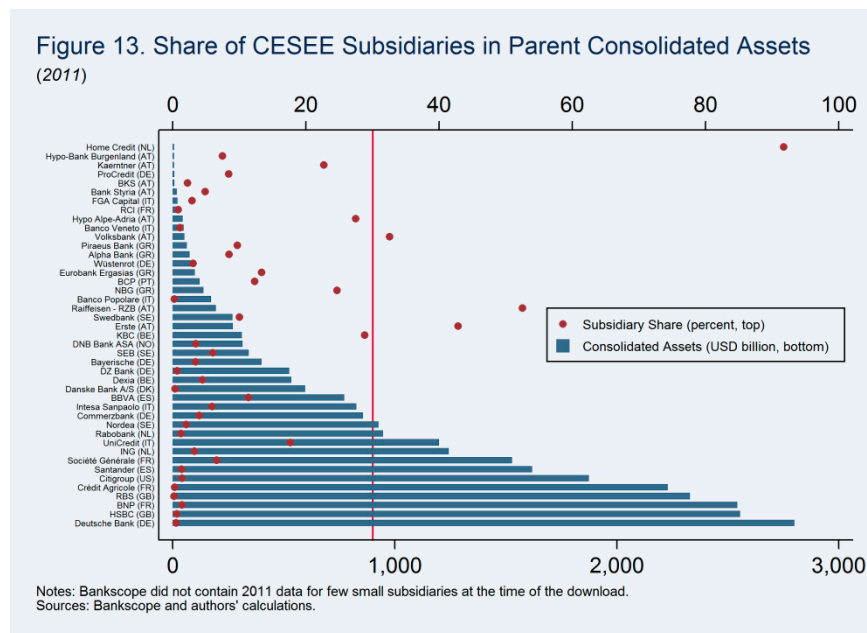
Notes: Data includes all foreign bank parents, including regional groups covered in Bankscope.

Only foreign control among the largest 3 subsidiaries by market share is reported.

Due to partial coverage of the BankScope database, ranking may differ from statistics of national authorities.

Sources: Bankscope and authors' calculations.

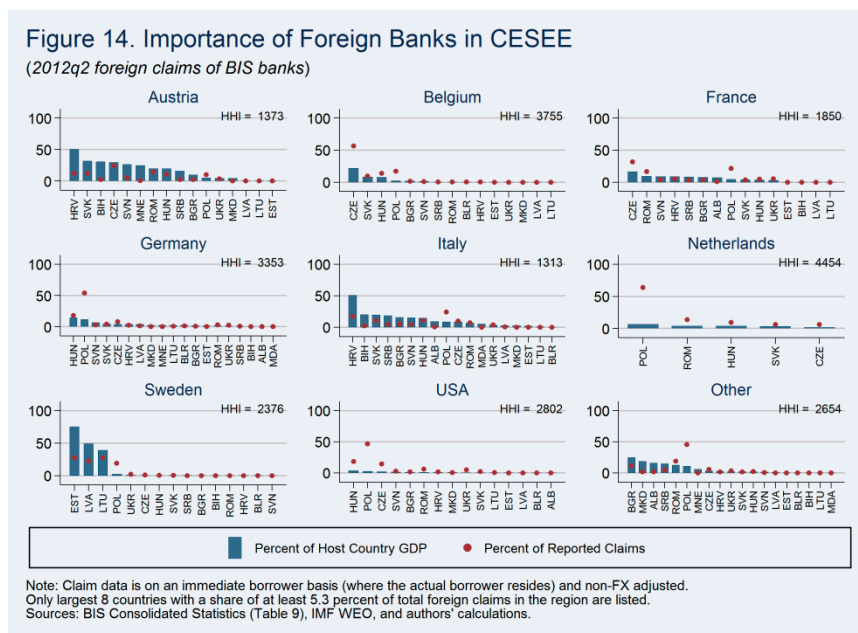
But except for essentially few Austrian groups, with subsidiaries exceeding 30 percent of consolidated assets, the region is not that important for foreign groups (Figure 13). Foreign groups in CESEE are very diverse. At one end of the spectrum, we find global systemically important financial institutions like Deutsche Bank, HSBC, BNP Paribas, RBS, and Crédit Agricole with total assets between USD2 and 3 trillion. At the other end, we find much smaller and often specialized groups like Home Credit, Hypo-Bank Burgenland, Kaertner Sparkasse, and ProCredit, with consolidated assets between USD5 and 8 billion. With the exception of very small groups (like for instance the Dutch group Home Credit), we find only Austrian subsidiaries accounting for more than 30 percent of consolidated group assets. These are the Erste Group, Raiffeisen RZB, and Volksbank International.²⁰ The subsidiaries of all other groups represent less than 30 percent of consolidated assets. This bears important consequences for regulators, as there is often a wedge between the importance of the foreign subsidiary at the host level, typically one of the major banks in the jurisdiction, and its relatively small importance within the Western banking group supervised by the home regulator.



Austrian and Italian banks remain the key players also after the crisis (Figure 14). They have consolidated foreign claims representing a large share in many host country GDPs. In addition, they have fairly diversified exposures to the region, as shown by the somewhat uniform distribution of reported claims across countries and low Herfindahl index (between 1,000 and 1,800). German, Belgian, Dutch, and US banks form a less important group of foreign players, as shown by their lower shares of consolidated claims in host country GDPs.

²⁰ Volksbank sold most of its subsidiaries to Sberbank Russia in February 2012 (See Box 1).

However, their exposures are concentrated in few countries such as Hungary (for German banks); Czech Republic (for Belgian banks); Poland (Dutch and US banks) as shown by the higher Herfindahl index (between 2,300 and 4,500). Finally, Swedish banks are mainly present in the Baltic countries while Spanish and Greek banks (grouped in “Other” in Figure 14) are mainly present in the Balkans.



In addition, recent M&A activity suggests that non Western European groups are increasing their presence in the region. The unfolding of the sub-prime crisis followed by that of the Euro-periphery sovereigns and banking sectors gave way to a generalized shrinkage of balance sheets. This has drastically reduced M&A activity globally and in the region. Notwithstanding the deceleration, important deals took place in 2012 with non Western European groups filling the vacuum created by Western European banks (Box 1).

At the same time, important Austrian, Italian and French groups have put in place more stringent limits on the funding credit lines of their CESEE subsidiaries. In some specific cases this was implemented through loan to deposit ratio requirements very close to, or below, 100 percent (for subsidiaries with lower funding gaps) or loan to deposit ratios rapidly converging to such level for other subsidiaries.²¹ These policies clearly aim to reduce cross border exposures, make the funding of each subsidiary balanced, irrespectively of the potential intervention from the parent company, while remaining competitive on the deposit side.

²¹ Discussions with banks risk managers, <http://www.unicreditbank.ru/eng/presscenter/news/article.wbp?Id=bc0bea38-d26a-4973-b04e-b898d620112d>, and Raiffeisen (2012).

Box 1. M&A in the financial sector during the crisis: interesting changes

The crisis drastically slowed down M&A activity in general. The slowdown of corporate finance activities was particularly remarkable until 2010, when a modest rebound materialized, bringing the volumes of M&A at around 80 percent of their 2007 value, up from around 65 percent in 2009. In 2011 the overall growth of completed M&A volume was a modest 3 percent relative to 2010. The picture for M&A in Europe is gloomier. In the first three quarters of 2012, the total value of completed global M&A in Europe went down by around 23 percent, if compared to the same period of the previous year (a 17 percent reduction in the number of deals). The picture for M&A in financial sector in Europe is even gloomier. The total value of completed financial sector M&A in 2012 decreased by more than 36 percent from USD94.6 billion to less than USD60 billion whilst the number of completed deals in the first three quarters of 2012 decreased by 27 percent from 313 to 266.²²

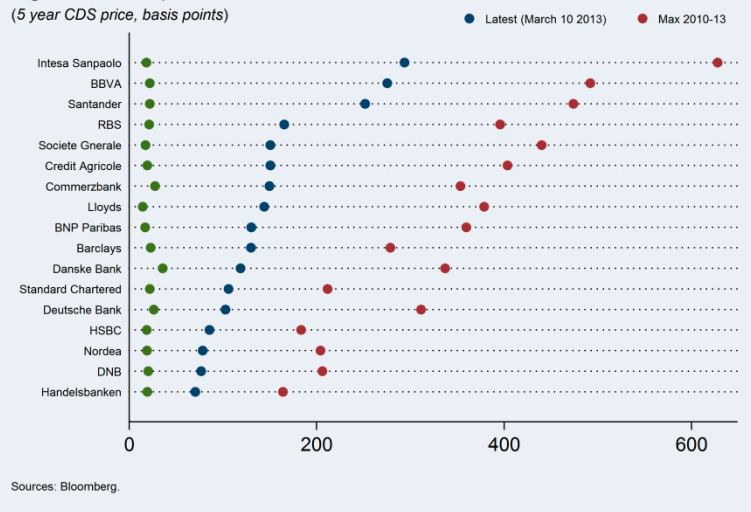
Nonetheless, important deals took place in the CESEE region in 2012 including KBC’s sale of Kredyt Bank in Poland to Santander’s Polish subsidiary Bank Zachodni for EUR790 million and the sale of Volksbank International, an Austrian bank, to Sberbank for more than USD600 million.

This sharp deceleration of M&A activity stems from the extremely low growth rates in the EU in the last few years, the high cost of funding for most Euro area banks (Figure 15), the increasing pressure from regulators and investors on banks to maintain a high and solid degree of liquidity and capitalization,²³ and parents’ initiatives to rebalance funding patterns of subsidiaries away from foreign funding.

In particular, Western European banks are transferring abroad liquidity initially aimed at financing the credit expansion in Central or Eastern European countries in a period characterized by prospective more stringent liquidity constraints imposed by regulators, liquidity crunch and a growing mass of non-performing loans at home and abroad as the macroeconomic cycle deteriorated almost throughout the entire continent.

Figure 15. European Banks CDS Prices

(5 year CDS price, basis points)



These trends towards lower loan to deposit ratios are also encouraged by home regulators. The Austrian National Bank introduced in the beginning of 2012 a series of capital, liquidity and resolution measures to strengthen the sustainability of the business model of Austrian banks and their subsidiaries (OENB 2012 and 2012a). In particular, the loan to local stable

²² See PWC (2012) and McKinsey Quarterly and Mergermarket M&A round-up for 2012q1-q3 available on www.mergermarket.com.

²³ See Beltratti, and Paladino (2012) and references therein for a more technical and formal interpretation about how M&A market works through a crisis.

funding ratio (LLSFR) was introduced to curb high growth loan rates (to non banks) in boom times that were not backed by strong local stable funding. Under these provisions, stable sources of funds include deposit from non banks, supranational funding (i.e., funding from IFIs) capital from third parties and debt securities issued to investors outside the group with maturity at issue of more than one year.

While recent trends suggest a rebalancing of funding structures for CESEE banks, longer term trends are more uncertain. In principle less reliance on foreign funding should reduce the regional impact of future crises; indeed, this also applies to capital and liquidity autonomy. Hence, further rebalancing would be desirable. However, long term trends are affected in different ways by the role of the still large stock of foreign currency (FX) loans, the implementation of the global regulatory agenda for banks and the status of development of capital markets in the region. We discuss these forces in turn in the remainder of this section.

B. The high stock of FX loans

The high stock of FX loans in many countries generates risks for a wide set of agents. For instance, banks are exposed to indirect FX rate risk through currency mismatches on borrowers' balance sheets.²⁴ Such indirect risk is very hard to assess, monitor and mitigate by underwriters who screen clients through low cost and standardized procedures: exchange rate risk and credit risk typically compound in a highly non-linear way. The need to maintain FX matching liabilities increases funding and liquidity risks for subsidiaries as this forces them to tap the wholesale funding market should liquidity calls from parents materialize. At the same time, it increases the risk of cross border contagion through the parent-subsidiary channel. Moreover, with FX mismatches, exchange rate volatility amplifies the volatility of capital adequacy ratios. Finally, excessive euroization of the economy may impair the conduct of monetary policy, it may impair the emergency liquidity assistance function of the central bank, it needs to be accompanied by a large volume of foreign reserves to prevent balance of payment crises, and, while in principle countries with pegged or fixed exchange rate are not exposed to FX risk, speculative attacks can generate FX rate crisis if the macro stance is not credible.

But above all, a large stock of FX loans impacts the ability of banking systems to rebalance liabilities away from foreign sources, at least in the short term. We saw earlier (Figure 12) how banking systems in the region are progressively rebalancing their funding structure away from foreign sources. This is taking place at a higher pace in countries with weaker macroeconomic stance. Irrespectively, the large stock of FX assets will set a limit to all countries in the region on the extent to which banks can fund assets in domestic currency without incurring large costs in covering net open positions. In the longer term, this constrain

²⁴ Either because of the absence of a natural hedge (lack of FX income) or because of the absence of a financial contract (typically unavailable to small borrowers or SMEs due to cost considerations).

should be less binding if no further FX loans are granted and if FX loans are refinanced by domestic FX deposits.

In order to mitigate future risks associated with excessive cross border funding volatility and FX loans, countries in the region will need to make more aggressive use of macroprudential policies, especially in a countercyclical manner. Macroprudential tools fall roughly into three categories: (i) tools seeking to influence lenders' behavior, such as cyclical capital requirements, leverage ratios, or dynamic provisioning; (ii) tools focusing on borrowers' behavior, such as ceilings on loan-to-value ratios (LTVs) or on debt-to-income ratios (DTIs); and (iii) capital controls²⁵ (IMF 2012c, 2013b and 2013c). Countries in the region have used primarily tools aimed at curbing the flow of new FX loans by influencing borrowers' and lenders' behavior.²⁶ However, greater countercyclical use of the full set of macroprudential tools in line with IMF (2012c and 2013c) and especially home-host cooperation to prevent circumvention of measures may be needed to prevent in the future accumulation of external imbalances associated with FX lending.

C. Global regulatory reforms

In the wake of the crisis, a far reaching agenda for regulatory reform of financial intermediaries was launched. In response to the crisis, the Basel Committee on Banking Supervision (BCBS) introduced two sets of reforms to the international capital framework for banks. The first package of measures (Basel 2.5) was issued in July 2009 mainly to strengthen the 1996 rules governing the capital treatment of the trading book. The second package (Basel III) was issued in December 2010 to further strengthen the three pillars of the regulatory capital framework. These reform packages include: (i) a new regulatory framework for capital, aimed at increasing the quantity and quality of bank capital (Pillar 1) as well as strengthening the supervisory review process (Pillar 2) and market discipline (Pillar 3); (ii) a new regulatory framework for liquidity; and (iii) capital surcharges for global systemically important financial institutions (GSIFIs).^{27 28}

²⁵ The definition of "macro prudential policy" is still evolving with the relative roles of traditional monetary and fiscal policies on the one side, and macro prudential policies on the other side, still object of debate. In addition, the contour of the set of macro prudential measures is also evolving. For instance, capital controls (now called by the IMF as "capital flow management measures") and macro prudential policies can overlap and their primary objectives may not be necessarily identical.

²⁶ Hungary, though, attempted to reduce the stock of FX loans by implementing a conversion scheme under which, banks were required to convert non-performing FX loans into HUF loans and write off a quarter of the value of the loans.

²⁷ See the overview in Appendix I and BCBS (2009, 2011, and 2012) for a detailed discussion of the proposals and their implementation timeline.

²⁸ Related measures not discussed in this paper include proposals for bringing all standardized OTC contracts on electronic trading platforms and cleared by central counterparties; proposals for the use of macroprudential

(continued...)

The full impact of these new measures in advanced countries will only be known with time. For instance, IMF (2012) preliminary analysis suggests that some of the features of financial intermediation in advanced economies associated with the current crisis still remain. In particular, financial systems are still overly complex, with strong domestic interbank linkages, and concentrated in too big to fail institutions. IMF (2012b) suggests that the economic impact in advanced markets is on average likely to be negligible with banks having many different margins to absorb the additional costs associated with the new prudential measures.

The discussion on the impact of such agenda on emerging markets has focused so far on unintended consequences. The international regulatory reform agenda has been driven primarily in response to the problems encountered in the advanced economies during the global financial crisis. However, emerging markets are generally different in terms of the health of their banking systems, the development of their capital and broader financial markets, and in the financial needs of the broader economy, given the pace and stage of their economic development. Consequently, it is possible that some regulatory changes aimed at curbing problems in developed financial markets may not be appropriate for emerging markets where starting positions and dynamics are different.

CESEE economies have strong financial links with Western Europe and will be affected both directly and indirectly by the regulatory reforms in the West. There are direct effects stemming from the local implementation of the international regulatory reforms as well as indirect effects stemming from the change in business models of international banks in advanced economies in response to the new regulatory landscape.

The direct impact of the regulatory reforms is negligible. Banks in CESEE countries generally maintain capital levels in excess of internationally agreed regulatory minima both because of higher minimum ratios specified by local regulators and also because of the higher degree of macroeconomic volatility and overall risk in these jurisdictions. In addition, the capital of banks in CESEE countries have generally a higher loss absorption capacity due to the scarcity of hybrid instruments (the use of common equity is more widespread). Hence, the adoption of higher level and quality of regulatory capital is not seen as a binding concern.

However, the indirect impact is likely to be more important. Exactly because of the large presence of Western European banks in the region, CESEE countries are more likely to be affected by the implementation of the regulatory reforms by internationally active banks.

The debate on unintended indirect consequences has so far been strictly qualitative and focused on specific aspects of the regulatory agenda discussed in turn in the remainder of this

policy tools, including tools to mitigate the impact of excessive capital flows; and proposals for direct industrial organization interventions aimed at capping the size and limiting the complexity of banks.

section. With one notable exception (Abascal *et al.* 2012) the analysis of the indirect impact on emerging markets of regulatory reforms in advance economies has been only qualitative. The aspects of the new regulatory framework object of the debate include²⁹: (i) the proposal for a Banking Union in Europe; (ii) the new Basel 2.5 and III capital framework for banks, including surcharges global systemically important financial institutions (GSIFIs) and the higher capital requirements by the European Banking Authority (EBA) for large banks in the EU; and (iii) the new Basel III liquidity framework. We discuss each aspect in turn in the remainder of this section.

The proposal for a Banking Union in Europe

The concept of a “Banking Union” was first explicitly launched at the extraordinary May 2012 Council meeting, and subsequently endorsed by the Council meeting of June 28 and 29 2012. This concept envisages the allocation of responsibility of banking supervision to a European Banking Supervisor (the ECB) through a single supervisory mechanism (SSM), a single resolution scheme, ideally centered on a single resolution authority, deposit insurance and common backstops.³⁰

The proposal stems also from the recognition of important weaknesses in current cross border supervision arrangements. Until now, the supervision of complex multinational banks has been performed through the interaction and co-operation among home and host regulators that periodically gather, together with representatives of the European Banking Authority, at the Colleges of Supervisors. This attempt to put in place homogeneous cross border supervision has never actually been fully successful. Indeed, it has been proving always extremely difficult to foster the convergence of diverging supervisory goals of home and host supervisors. This, also because of the lack of a true decisional power in the hands of the colleges and of their leading members.

Non Euro area countries could benefit from strengthened cross border supervision by opting in.³¹ The SSM would reduce dispersion of norms, rules and *ad hoc* interventions, thus lowering regulatory costs, by unifying the approach to supervision. For instance, during the crisis, most host regulators have been using the Supervisory Review and Evaluation Process (SREP) to introduce extra capital charges on banks.³² The decisions to require higher capital

²⁹ See Abascal *et al.* (2012), B20 (2012), FSB (2012), IIF (2012), Watanagase (2012), and papers there referenced for a broader discussions.

³⁰ See IMF (2013a) for a more normative analysis of the case for, and the design of, a banking union for the Euro area.

³¹ Darvas and Wolff (2013) provide a very good analysis of the advantages and disadvantages for non Euro area countries in joining the SSM.

³² Under the SREP, various different drivers can be invoked for this purpose such as, for instance: excessive credit risk concentration, inadequacy of credit risk processes, inadequacy of risk governance rules, inadequacy of IT, *et cetera*.

charges were not coordinated across host jurisdictions and took different forms thereby increasing regulatory burden for internationally active banks. In some cases, host regulators applied capital add-ons on the Pillar I credit risk capital allocation. In other cases, a minimum threshold was required either for Tier 1 or Total Capital Ratio. In yet other cases, host regulators chose to apply a multiplier, larger than 100 percent, to the level of economic capital calculated for Pillar I and Pillar II risks by the bank throughout its ICAAP. All these measures were ad-hoc, in the sense that they were tailored to each bank and very seldom designed at the country level. Hence, they increased the variance³³ in the capital requirements of banks within and across jurisdictions.³⁴ The differentiated interventions in the retail mortgage segment are another example of *ad hoc* measures. After the subprime crisis in the US and the rapidly increasing default rates in Hungary, various regulators put in place, at different times and with different formats, various limits on the concession of credit for residential mortgages. Slovakia, Croatia, and, even Hungary now forbid banks to provide housing mortgages with an Loan To Value (LTV) larger than 75-80 percent.³⁵ The problem, however, is that under the pressure coming from the need to maintain market shares, some banks have been designing loan contracts that, *de facto*, circumvent these limits and grant some selected customers in certain wealthy urban areas mortgages with an LTV very close to 100 percent.³⁶ So far, these practices, which are perfectly legal, seem not to have received a very high level of attention from some regulators that strictly apply the rules but somehow overlook the need to keep focused also on potentially irresponsible behaviors of commercial banks. This obviously creates another source of fragmentation and uneven playing field in an area that, in principle, should be homogeneous for all banks, including cross-border ones.

However, there are long term uncertainties that may offset the aforementioned benefits. In particular, improvements in cross border supervision will be limited without concrete progresses on common resolution, safety nets and backstops hence, reducing the attractiveness of the proposal for non Euro area countries. The difficulty in making a proper cross border supervision work in the past was rooted in three main issues that still need to be fully resolved:

- A sound form of joint supervision itself (i.e., how to measure the capital adequacy of a multinational banking group, how to measure the reliability of its risk management

³³ Most CESEE countries had already very different levels of CARs.

³⁴ For a snapshot of selected unilateral financial sector measures in Central Europe, refer to table 3.4.1 in EBRD's Transition Report 2013.

³⁵ In Poland, an LTV of 80-90 percent is required but this requirement can be waived if certain conditions are met.

³⁶ One practical way of doing this is by signing with the client two contracts. One contract is a proper mortgage and the other is a long term financing contract which has the same duration, the same collateral and the same price of the mortgage contract.

models and measures applied to very different macroeconomic and financial environments, how to assess the governance within an international banking group, etc.);

- Commonly agreed upon resolution plans for banks in different countries;
- Common safety nets and backstops; in particular, sharing of fiscal burden and fiscal responsibility in case of financial distress of multinational groups with affiliations in different countries.

Financial integration is, geographically speaking, much wider than political and fiscal integration, and a fully integrated financial sector supervision is very hard to implement without some agreements on the resolution of cross-border banks and the sharing of fiscal burdens in case of distress. The inability to design and enforce burden sharing arrangements (i.e., to move funds from one country to another) when internationally active banks fail has made cross border supervision ineffective before. Not surprisingly, the most difficult stumbling blocks in implementing the banking union proposal are to be found in the resolution and in the fiscal efforts to be burdened by taxpayers of each country in case a multinational banking group is rescued through sovereign intervention. In order to have a proper “banking union” it is imperative to put in place, not just a common yardstick for supervision, but also common and clear rules on funds flows and fiscal responsibility. These longer term uncertainties may offset the short term benefits of improved cross border supervision for many non Euro area countries.

In addition, other more technical aspects of the proposal may offset the short term benefits for non Euro area countries. For instance, the treaty base (Art. 129(1) of the treaty on the functioning of the EU) provides a narrow basis for the involvement of non Euro area countries in supervision, should they opt in. Indeed, non Euro area countries are not represented (do not have a vote) in the governing council of the ECB while they would be represented only in the governing council of the SSM. Notwithstanding this observation, the ECB has ultimate decision making power on supervision matters. Also, despite the fact that non Euro area countries can always opt out, this choice may be difficult to take *ex post*.³⁷

Finally, uncertainties associated with possible discriminatory measures against non-participating member states by the home supervisor of the parent bank could limit the activities of large financial groups in non-participating member states (and also in non-EU countries). Although it is unclear at present how these measures could materialize, their conceptual relevance should not be discounted.

³⁷ Opting out *ex post* carries stigma especially if non Euro area members are also engaged in other forms of negotiation with the EU (e.g., Euro area accession).

In general, the uncertainties associated with opting in the banking union project also affect the long term foreign funding equilibrium for banks in non Euro area countries. On the one hand, substantial progress on all elements of the banking union project would facilitate a unified approach to cross border supervision, to risk management across all countries, and help identify and prevent the accumulation of excessive risk concentrations. On the other hand, lack of progress would make inefficient pools of capital and liquidity more important for both the home and host supervisor point of view. In other words, the long term funding equilibrium will depend on the next steps taken in the design of the EU financial architecture.

The new capital framework for banks³⁸

Three sets of possible unintended consequences are ascribed to the adoption of the new capital framework for banks. Decline in cross border funding could be excessive, overly fast and concentrated; thus, hampering recovery and economic growth in general by reducing credit availability. In addition, specific lines of finance that are growth enhancing are particularly exposed to deleveraging, like infrastructure finance and trade finance booked by the subsidiary. Finally, the cost of finance in the region could increase due to inherent inconsistencies in the application of certain capital rules at the solo and consolidated levels. We discuss these three sets in the remainder of this subsection.

Deleveraging by internationally active banks could lead to excessive, overly fast and concentrated decline in cross border funding. The new capital rules exacerbate the deleveraging process of internationally active banks which risks being disorderly and unduly concentrated if advanced countries frontload implementation. For instance, the new Basel 2.5 package increased the cost for internationally active banks to hold trading book exposures in CESEE countries. Since those banks act as market makers and are major providers of liquidity in some CESEE countries, this could have adverse consequences and may ultimately impact the development of domestic financial markets in those countries. Similarly, the need for internationally active banks to raise new high quality capital or to reduce risk weighted assets may prompt them to reduce exposures to CESEE countries in excess of what would be considered “healthy”³⁹ deleveraging. Finally, the race by some advanced countries to adopt the new requirements ahead of the proposed timetable (as to preempt unfavorable market reactions on the financial situation of their banks) increases the speed of deleveraging while making it potentially disorderly and overly concentrated in those CESEE countries where subsidiaries are present. The 2011 decision of Sweden to impose a minimum core Tier 1 capital equivalent to 10 percent of risk-weighted assets in 2013 and 12 percent of risk-weighted assets in 2015 was considered by commentators as an example of regulatory frontloading.

³⁸ This subsection focuses on Pillar 1 considerations with the same considerations applying to GSIFs surcharges and EBA additional capital requirements.

³⁹ See Lipton (2012) for an institutional view on this point.

Deleveraging by internationally active banks could translate in weak credit growth and generally higher cost of finance. The adoption of the new prudential measures will prompt banks in the West to change their business model. In particular, the higher capital charges could prompt stronger retrenchment in high risk weight credit lines than what would be otherwise caused by local demand conditions. Alternatively, the increased cost of equity in the West could translate to higher cost of finance in the East, unless local savings cannot be mobilized more efficiently through local banks and/or capital markets.

Moreover, retrenchment in specialty finance would be particularly harmful to the growth outlook of the region. Some of the sectors most exposed to the retrenchment process are specialty finance lines, particularly infrastructure finance and trade finance. Infrastructure finance is characterized by long maturities, heavy use of syndication, and dependence on long-term dollar funding that make it particularly exposed to deleveraging. Trade finance is cheaper than debt financing for regional SMEs due to the underdeveloped nature of local capital markets and the fact that trade finance is more structured and self liquidating than debt financing. Both are important for regional long term growth but the new capital framework foresees a 100 percent credit conversion factor⁴⁰ when calculating the leverage ratio for off balance sheet trade exposures (such as contingent letters of credit and/or insurance guarantees) that could be excessive per se and/or unduly increase the procyclicality of provisions over the business cycle.⁴¹

In addition, elements of the regulatory agenda could promote rebalancing of claims towards the government sector, thus adversely affecting growth. The quest of Western banks to reduce high risk weight exposures to contain risk weighted assets could skew the distribution of foreign claims on the region away from FDIs or loans towards government bonds. The shift from private sector to public sector funding could reduce the average productivity of the marginal foreign dollar invested in the region and through this channel, adversely affect economic growth. This kind of rebalancing away from the private sector has been induced, in some countries by the dire straits in which the SME corporate segment has been muddling through in the last few years, discouraging investors and potential creditors.

The cost of finance in the region could increase due to inherent inconsistencies in the treatment of sovereign exposures at the solo and consolidated levels. Host supervisors typically allow for lower capital risk weighting for exposures to the host sovereign for the purpose of solo capital requirements. Home supervisors, or group internal models, may treat exposures of subsidiaries to host sovereigns with a higher risk weighting. The application of risk weighting at the consolidated level could result in higher cost of finance in the host

⁴⁰ The Basel II Current Exposure Method (which applies to the Basel III Leverage Ratio) requires that off-balance sheet items (such as contingent letters of credit, trade guarantees, direct credit substitutes, et cetera) be converted in a consistent manner to a “loan equivalent” amount through the use of credit conversion factors.

⁴¹ The leverage ratio is not expected to be implemented before 2018, although nothing prevents jurisdictions to adopt measures earlier because of domestic considerations.

jurisdiction than what would be the case if only capital requirements at the solo level were applied.

Finally, the cost of finance in the region could increase due to the use and inherent cross border tensions in the regulation of hybrid (bail in) instruments. Subsidiaries of foreign banks may find it difficult to issue hybrid instruments because they are typically fully owned by their parent and with no publicly owned shares available for trade (float). This eliminates the market signal for the convertibility of hybrid instruments thus, increasing the cost of capital for subsidiaries. At the same time, home supervisors need to define the trigger for the purpose of application of capital provisions at the consolidated level while host supervisors need to define the trigger at the solo level. Clearly, home and host supervisors have different incentives when the banking group has solvency problems: the host supervisor would prefer to ring fence the subsidiary while the home supervisor would like to ensure capital mobility. Triggers at the solo and consolidated levels are likely to be different and triggered at different times raising uncertainty regarding the pricing of hybrid instruments and overall cost of capital.

The new liquidity framework for banks⁴²

Four sets of possible unintended consequences are ascribed to the adoption of the new liquidity framework for banks. The lack of high quality liquid assets in CESEE countries may unduly discourage banks to extend credit; cheap liquidity provision by the relevant central bank may reduce underwriting standards; cross border tensions in the application of the liquidity provisions may expose subsidiaries to excessive liquidity risk in time of stress; and the increased demand for level 1 assets may increase systemic risk.

The need to comply with the liquidity provisions in CESEE countries may unduly impair credit growth. The undeveloped nature of capital markets in the region implies that banks are the main intermediaries of long term project financing. In the absence of policies aimed at developing alternative source of finance, the application of the liquidity framework may prompt some banks to substitute growth-supportive longer-term lending activities, such as investment financing, with shorter-term lending. Small specialized financial institutions, which are mainly oriented to microfinance and retail lending, could also be affected.

In addition, inherent tensions in the application of the framework at the consolidated and solo levels may expose subsidiaries to excessive liquidity risk. There is an inherent tension between the home and host supervisors in the definition of the liquid assets: the host supervisor may be interested in ring fencing liquidity, even if this may result in inefficient

⁴² Two liquidity standards have been developed by the BCBS: the Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR). The LCR requires banks to have sufficient unencumbered, high-quality liquid assets to withstand a stressed 30-day net outflow funding scenario specified by supervisors. The NSFR is a longer-term structural ratio to address liquidity mismatches and provide incentives for banks to use stable sources to fund their activities (BCBS 2010). The two standards are to be implemented in 2015 and 2018, respectively.

trapped pools of liquidity and higher funding costs, while home supervisors may be interested in ensuring mobility in case of stress. If the liquidity is managed at the consolidated group level, these different incentives and possible differences in the definition of liquid assets between the home and host jurisdiction may lead to a disproportionate treatment of liquid assets (i.e., the shedding of assets considered liquid by the host but not by the home authority) and thus expose the subsidiary and its financial market to risk of liquidity shortage in time of stress. In this respect, however, some progress in terms of clarity and transparency of treatment is being made by the design of various Recovery and Resolution Plans that many banks are putting in place under the pressure of various host regulators across Europe.

In jurisdictions with insufficient liquid assets, risks may be unduly transferred onto the central bank balance sheet and the monetary policy transmission channel could be impaired. In jurisdictions with insufficient liquid assets, banks can tap contractual committed liquidity facilities from the relevant central bank, with a fee. Determining the fee in an illiquid market is problematic and too high a fee would expose domestic banks and their financial market to risk of liquidity shortages in time of stress. Too low a fee would induce banks to leverage and reduce credit underwriting standards, possibly promoting asset bubbles.

Finally, the application of the liquidity framework in CESEE countries may increase systemic risk. As similarly argued earlier for the capital framework, the higher demand for level 1 assets (government bonds) may excessively expose banks to sovereign risk and, through this channel, increase systemic risk that other measures of the new regulatory agenda are expected to decrease.

In summary, the indirect effects of the regulatory agenda in the West may well be more capital, funding and liquidity autonomy of foreign subsidiaries. Despite the political and regulatory efforts to promote financial integration in Europe, there is a limit on how much progress can be made. The limit is posed by the lack of fiscal integration. Without fiscal integration, the banking union project could have limited overall effectiveness. In particular, the SSM may well only provide marginal improvements on existing cross border supervision practices and prompt few non Euro area countries to evaluate carefully the benefits of joining it. Without fiscal integration “cross-border banks are international in life but national in death”. Hence, and to the extent that existing provisions allow for some discretion, host supervisors will want to promote capital, liquidity and funding autonomy of subsidiaries in life and to ring fence in death, especially when there is the risk of parents abandoning subsidiaries. For instance, host supervisors may promote higher capital standards at the solo level to compensate for the difficulty of foreign subsidiaries to issue hybrid instruments. When these can be issued, host supervisors may define conversion triggers that limit capital mobility within the group. Similarly, host supervisors may be interested in ring fencing liquidity, even if this may result in inefficient trapped pools of liquidity and higher funding costs, while home supervisors may be interested in ensuring mobility in case of stress.

D. The status of capital market development

Capital markets would promote capital formation, offset the consequences of deleveraging, and promote rebalancing of funding towards local sources. The further development of an institutional investor base would promote aggregate saving and through this channel, capital formation and labor productivity.⁴³ This can play an important role in offsetting the implication of the deleveraging of the banking sector and reduce risks on bank balance sheets. Moreover, an increase supply of long term and stable funding sources for banks would promote rebalancing of liabilities away from foreign sources. However, improvements in the investment regulation of institutional investors, financial infrastructure and government debt management will be necessary to ensure that part of the investments of these institutional investors are channeled to these markets.

Institutional Investors⁴⁴

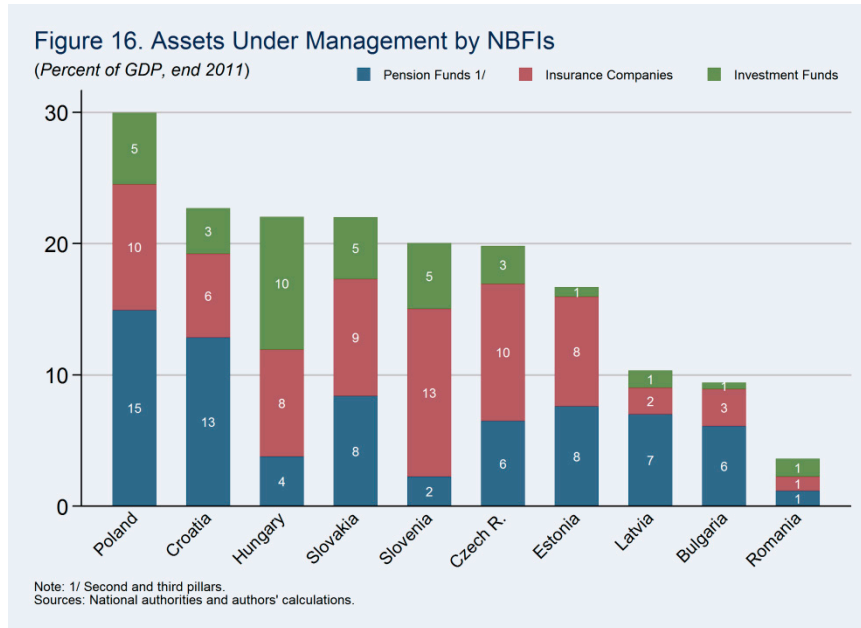
Institutional investors in the region manage a significant amount of assets. Insurance companies and pension funds are, with few exceptions, the most significant players in the CESEE area (Figure 16 and 23).⁴⁵ The volume of assets accumulated by pension funds depends on the time of the reform, the percentage of contributions and the rates of return. For example, the 15 percent of GDP of assets managed by pension funds in Poland is explained by being one of the early reformers (1998), with an annual average real rate of return of 5.3 percent between 1999 and 2012, and a contribution rate of 7.3 percent (until 2011). This contrast with Romania, whose reform took place in 2008 with an average contribution rate of 2 percent of the wages; or with Slovakia, whose reform took place in 2005 with a real return of 0 percent, and a contribution rate of 9 percent until 2012.⁴⁶

⁴³ This is the classic Feldstein-Horioka argument that domestic savings are not perfect substitute for international savings and interest rate differentials do not equalize.

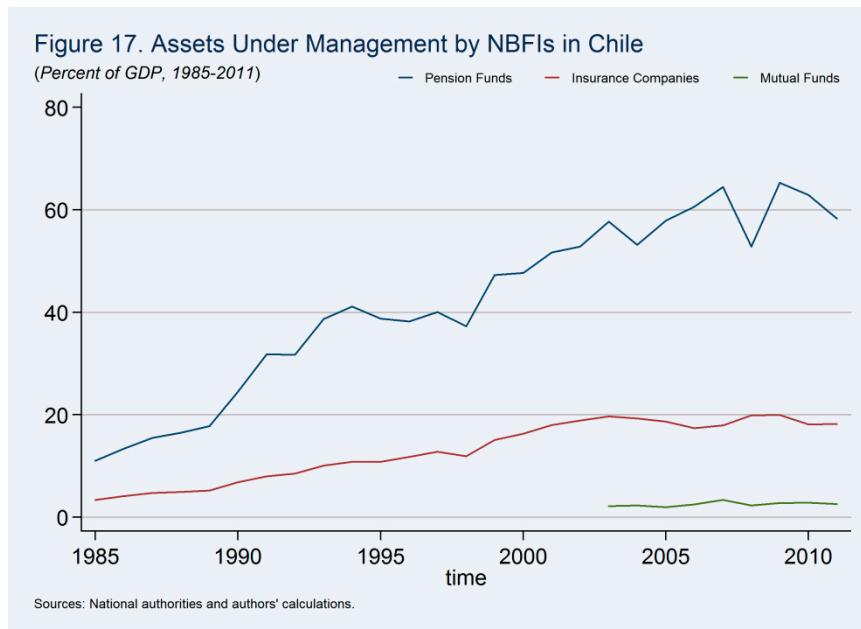
⁴⁴ Pension funds, insurance companies, and mutual funds.

⁴⁵ In 2011, the portfolio of insurance companies investment funds and pension funds amounted to EUR73, EUR41, and EUR83 billion, respectively (see also Figure 20).

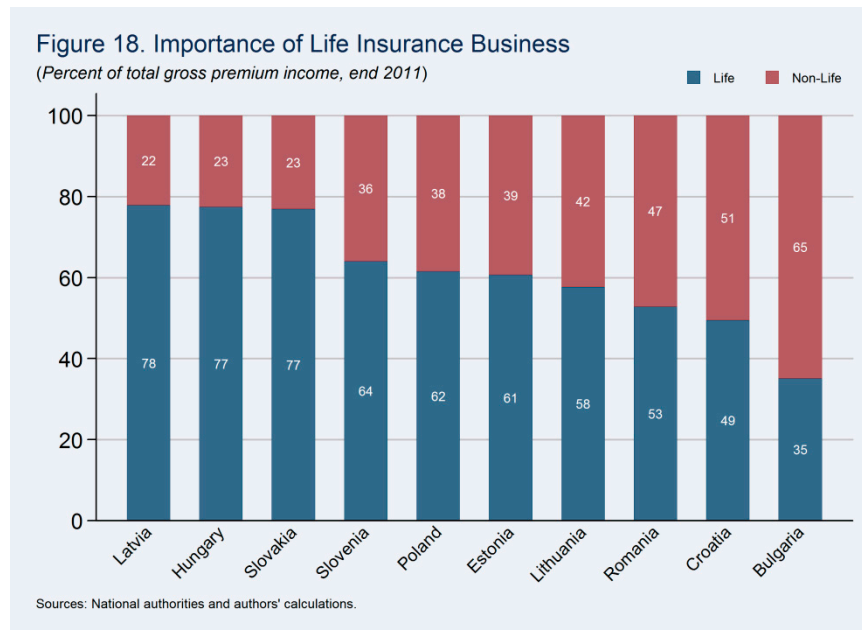
⁴⁶ For a discussion about the motivation and implication of the reversals and adjustments of the pension reforms in CESEE countries after the crisis see Price and Rudolph (2013).



In addition, pension funds and life insurance companies are expected to grow in the next two to three decades. Given that most of the reforms took place in the last decade and since participants were mostly young, pension funds should continue accumulating assets for at least two more decades. If the assets in the accumulation phase turn into annuities, the life insurance business may grow as contributors start to retire. The experience with the pension reform in Chile, which was used as a model for reform in most of the CESEE countries, shows not only growth in the AUM by pension funds, but also by life insurance companies (Figure 17).

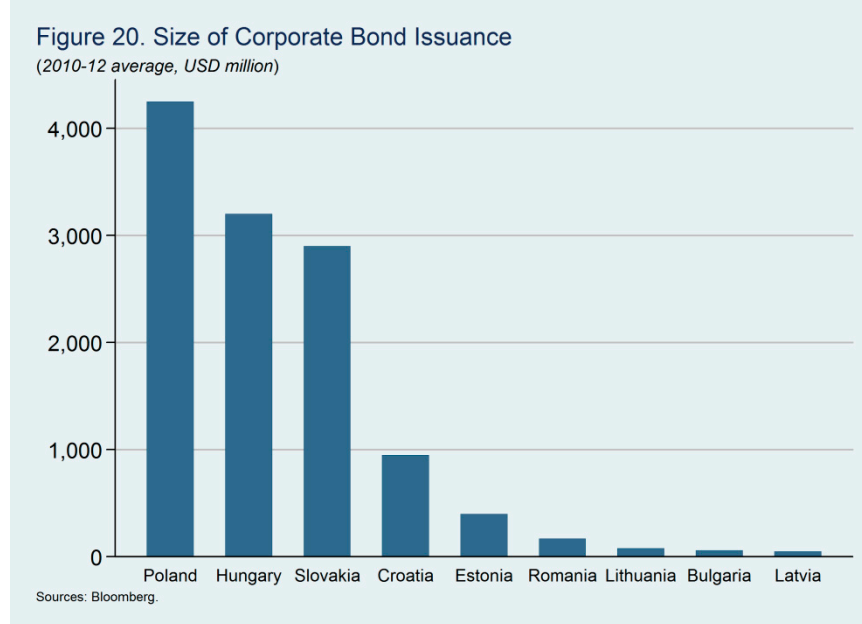
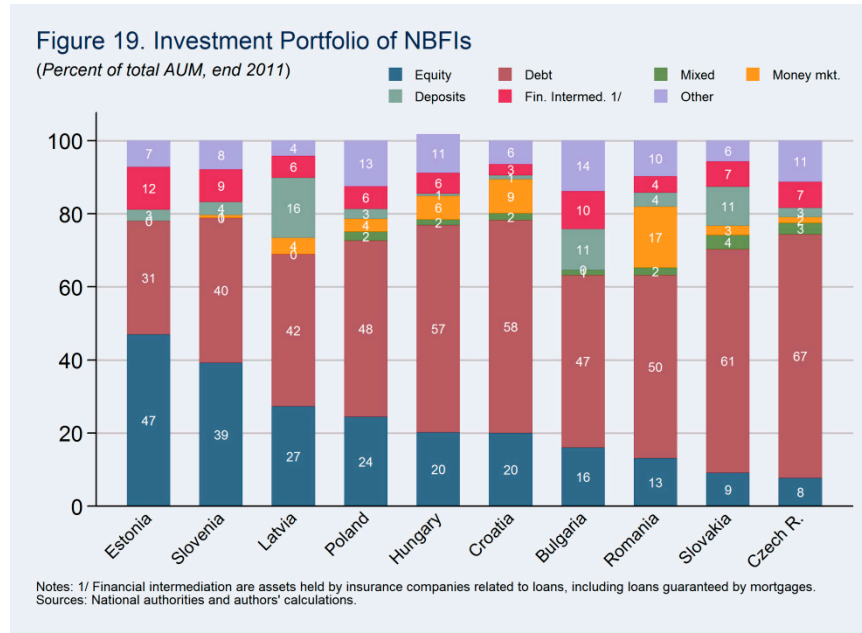


The impact of the insurance market on the domestic capital market will be noticed when the annuities market starts to develop. The life insurance market is sizable in many countries of the region compared to the non life business, including Poland, Hungary, and Slovakia (Figure 18). Typically life insurance companies offer a combination of savings products and more traditional life insurance products. In the case of Chile, the annuities business—both old age annuities and disability and survivorship annuities—was the main source of growth in the assets managed by insurance companies. In CESEE countries, the contribution of the insurance sector to capital market development will be fully realized only when the annuity business for second pillar retirees will develop.⁴⁷ The contribution of the disability and survivorship insurance will be much lower as, contrary to Chile and other Latin American countries, this line of business is managed by the social security system.



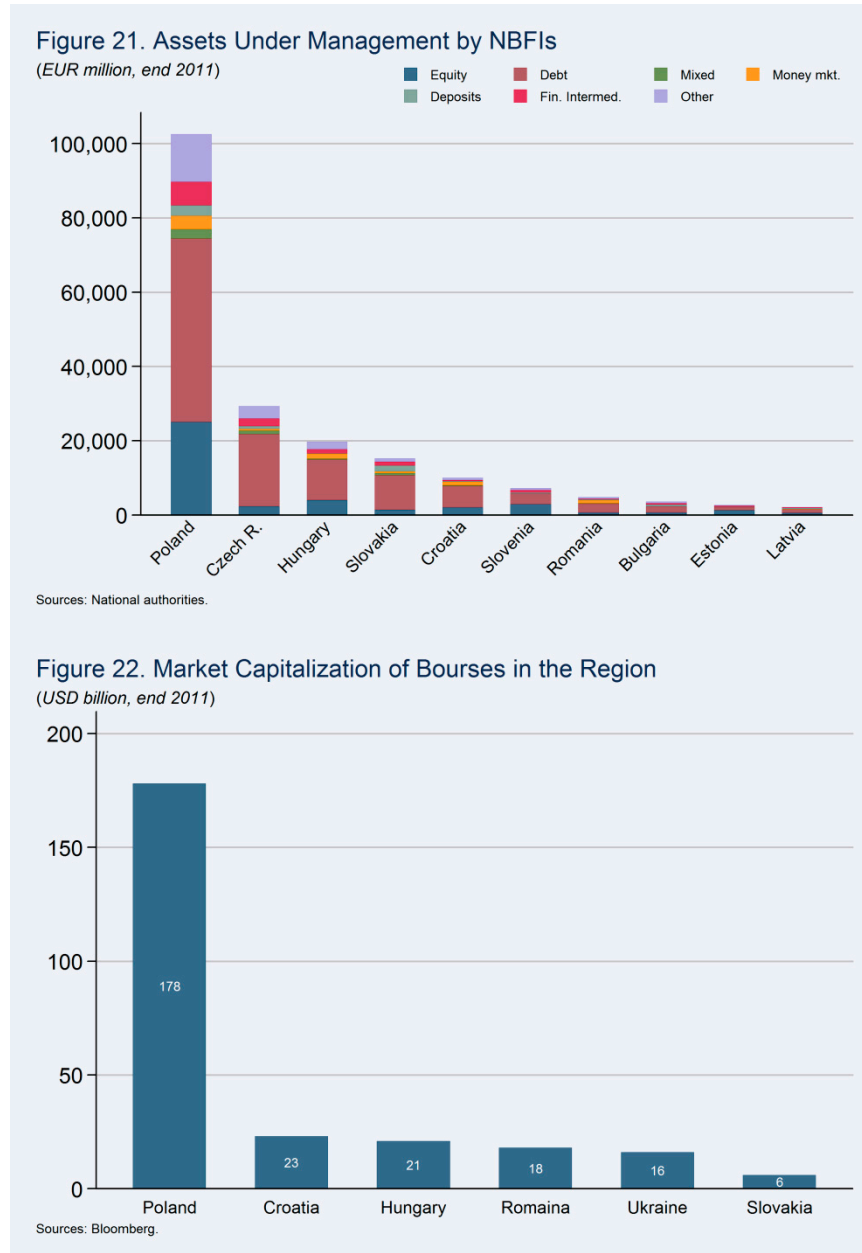
The overall portfolio of NBFIs in CESEE countries is still concentrated in government bonds and bank deposits. On average, bonds and bank deposits account for more than two thirds of the total assets under management of pension funds and insurance companies. Since corporate bond markets are relatively small in volume in the region (Figure 20), institutional investors invest mostly in government bonds. With the exception of Estonia and Slovenia, equity participation is about 10 to 25 percent of the total assets managed by NBFIs. While as a proportion of total assets they are significant, the dollar value of the equity investments in Estonia and Slovenia are small. In the case of Estonia, and the other Baltic countries, the bulk of the equity investments is invested abroad (Figure 19).

⁴⁷ With the exception of Estonia, most of the countries of the region do not have in place a clear mechanism for paying pension benefits from the funded system.



Poland stands out in the region as a relative success story. The relatively larger size of the Polish market has been supported by the presence of domestic institutional investors (Figure 21). Despite that only one quarter of the total assets of NBFIs is invested in equity, Poland has been able to develop a buoyant equity market. Poland is currently one of the most active exchanges in Europe in terms of number of Initial Public Offerings. In the past three years, Warsaw Stock Exchange has led the number of IPOs in Europe with 112, 203, and 106 new companies into the market. Although the value of transactions is smaller compared to Western European exchanges, it is significant as a source of financing for domestic and

regional businesses.⁴⁸ The regulatory restrictions faced by Poland's pension funds for investing abroad have created a natural demand for local equities. In 2012, domestic pension funds hold approximately 9 percent of the market capitalization of the stock exchange. As shown in Figure 22, the market capitalization of the Warsaw Stock Exchange is much larger than the combined of the other exchanges in CESEE countries.



⁴⁸ WSE total value of IPOs in 2012 was EUR 731 million, of which Alior Bank was EUR 511 million.

The future of institutional investors in CESEE countries

While the volume of assets managed by these institutional investors has the potential of injecting competition in the financing of domestic products (equity, long term bonds), the impact of these institutional investors on capital market development has passed relatively unnoticed. It is interesting to notice that despite the large volumes of debt issued in most of these countries, yield curves remain relatively underdeveloped, especially in the long end of the yield curve. This contrasts with the long term nature of pension funds and life insurance companies.

Improvement in banking practices and bank deleveraging would facilitate the development of the corporate bond market and other private sector market. In the presence of a banking system strongly dominated by international banks and abundant availability of funding from the West, the banking sector in CESEE countries was able to satisfy the credit demand in the region. Market practices that facilitated bank lending in foreign currency to local companies and individuals without properly accounting for currency risks served as an important deterrence mechanism for the development of the fixed income market. In the absence of strict lending practices, local businesses saw the possibility of taking banking debt at a relative low cost. As the new normal for the banking sector in the region assumes that lending growth will be bounded by deposit base growth, institutional investors may play a more prominent role in financing the residual demand.

Assuming fair competition from the banking sector, lack of development of the corporate bond market in the region has its roots in a regulatory framework for pension funds with excessive emphasis on short term returns. With the current regulatory framework, pension funds are not interested in investing in long term maturities, and therefore governments do not have interest in issuing instruments in the long end of the curve. Governments pay a high liquidity premium for issuing long, especially in inflation linked instruments. Corporate bond market does not develop because it results too expensive to price long term instruments for corporate, and prefer to take bank loans for shorter maturities assuming interest rate risk.

Excessive emphasis on short term performance of pension funds has focused the attention of pension funds and other long term contractual savings vehicles in liquid instruments and with relatively short maturities. While from a strategic asset allocation perspective, pension funds should invest in long term inflation index bonds, by penalizing deviations against the average rate of return of the industry, the existent regulatory framework in most of these markets brings asset portfolios into suboptimal allocations.⁴⁹ Rudolph *et al.* (2010) suggest the importance of creating exogenous portfolio benchmarks to align the duration of the fixed income portfolios of pension fund with the one that is consistent with the optimization of the pensions at retirement age.⁵⁰ From the fixed income supply side, under the current regulatory

⁴⁹ Castaneda and Rudolph (2010) and Bazak and Makarov (2009).

⁵⁰ The argument is valid for the overall strategic asset allocation.

framework, governments are unable to see a strong demand for long term and inflation linked instruments, and overemphasize issuance in the short end of the curve.

It is not clear the effect of Asset Liability Management (ALM) practices for life insurance companies on the development of the domestic capital market, as the traditional life component is relatively small. The impact of life insurance on capital market development can be sizable, as it implies significant asset accumulation, but the impact of non life insurance is modest at the most. As the life insurance market in CESEE countries has still an important component of non life, and the life part includes the management of defined contribution pension plans and other forms of contractual savings that are not subject to ALM rules, the bias of insurance portfolio towards bonds is explained by different factors.

Lack of financial infrastructure, including credit rating agencies, is also an impediment for developing the fixed income market. In addition to the lack of benchmarks for pricing corporate bonds, institutional investors do not have proper vehicles for assessing the relative risks of these instruments, which are typically given by credit rating agencies.

Access to the Euro area would facilitate the capital flows within the region from institutional investors. Currency risk is also an impediment for investments across the region. It is common to find that institutional investors outgrow the domestic capital market, and it become necessary to open the opportunity for investments abroad. This is especially the case in the smaller economies of the region. While investors feel confident about potential exposure to Euros, they are more cautious about exposing to local currencies in CESEE countries. As the fixed income market is a long term market, lack of a cross currency market is an impediment for investments within the region.

In addition, access to the Euro area would help to consolidate the stock exchanges. In any scenario it is unlikely a buoyant developments of small stock exchanges in the region. Consolidation of the exchanges and connectivity across the region would facilitate listing of securities and promote wider participation of investors across the region. Connectivity implies that investors and issuers will feel that will be treated fairly and therefore would be willing to participate independently of the location of the exchange.

While there are alternatives for bringing more efficiency and reducing fees in the pension fund industry, the development of an expertise on credit analysis in the region requires proper compensation to asset managers. Excessive tightening of fees charged by pension fund asset management companies may have contra productive effects on the asset allocation of pension funds. If pension fund management companies feel that they are not properly remunerated, they may react by reducing the management costs and investing in instruments that are costless to manage, including government bonds and bank deposits. Slovak pension funds are a clear case of a regulatory framework that reduced below expectations the fees charged by asset management companies and increased the costs for the asset managers of having volatile instruments in their portfolios. The industry responded by investing the

portfolio in short term government securities, which resulted in zero real returns in the past five years.⁵¹

The contribution of institutional investors to infrastructure financing requires improvements in the enabling environment and an active role of the government in promoting private sector participation in the financing of these projects. Transition countries are relatively late in this field, as Europe granted resources for these purposes. Still the needs are important, and long term institutional investors may contribute to its financing. Governments would need to develop specialized agencies for the elaboration of the proposals, and may consider providing guarantees in some cases. The nature of infrastructure bonds is very appealing to pension funds and life insurance companies, as they are long term in nature and low risk, if properly structured.⁵²

V. CONCLUSIONS

In the years preceding the crisis, high levels of foreign bank funding in the CESEE region were promoted by strong domestic demand, reduced contribution of net exports, consequent external imbalances, underdeveloped capital markets limiting aggregate saving, and high foreign banking presence. Notwithstanding this general picture, the aforementioned factors played different roles in different countries resulting in a highly variable dependence on foreign funding by individual countries. For instance, foreign funding in Albania, Belarus Czech R., Macedonia, Moldova, Montenegro, and Slovak R. amounted to less than 20 percent of banking sector assets on the eve of the crisis.

More recently, many factors are prompting banks in CESEE to shift funding away from foreign sources. The region has rebalanced growth from internal domestic demand towards external demand, prompting an improvement in current account deficits and a decreased reliance on capital inflows. In addition, the global financial crisis and the evolution of the fiscal crisis in Western Europe have reduced the ability of the region to tap international savings to finance domestic economic growth. At the same time, international active Western European banks need to strengthen their balance sheets. In doing so, they require their subsidiaries in CESEE to meet loan to deposit ratio targets very close to, or below, 100 percent. Finally some regulators are also promoting higher reliance on stable and local funding sources.

Forecasting the extent and duration of this rebalancing process is difficult. On the one hand, unintended consequences associated with the implementation of the global regulatory agenda could accelerate the process and hurt credit growth. For instance, the new capital rules for banks may exacerbate the deleveraging process of internationally active banks and increase

⁵¹ For a discussion of mechanisms for reducing fees, see Rudolph *et al.* (2010) and Price and Rudolph (2013).

⁵² For a discussion about the experiences of PPPs see Guash (2007).

the cost of finance in the CESEE region. In particular, cross-border funding decline risks being disorderly and unduly concentrated if advanced countries frontload implementation. In addition, the application of the liquidity framework may prompt some banks to substitute growth-supportive longer-term lending activities, such as infrastructure financing, with shorter-term lending; it may increase systemic risk by the higher demand for level 1 assets and hence the demand for inefficient capital and liquidity pools; and in jurisdictions with insufficient liquid assets, risks may be unduly transferred onto the central bank balance sheet; all forces suggesting reduced need for foreign funding. On the other hand, foreign groups continue to be systemically important in many countries and the correlation between foreign ownership and funding is statistically positive in all countries in the region if we account for the deposit base available to fund loans. This suggests that foreign funding may continue to be high (consistently with evolution of the fiscal crisis in the West). In addition, many countries in the region have still a large stock of FX loans that need to be funded by foreign liabilities to avoid excessive hedging costs.

Likely, the long term funding equilibrium will depend on the next steps taken in the design of the EU financial architecture which is currently characterized by a still uncertain design and timetable. Therefore, from the point of view of both the home and host supervisors, increased funding autonomy of subsidiaries is consistent with limited progress in areas such as cross border supervision, resolution, and *ex post* enforceable burden sharing agreements. On the one hand, the loss of reputation associated with abandoning ailing subsidiaries can jeopardize funding costs at home. On the other hand, host supervisors want to protect taxpayers in host countries to large contingent liabilities if parents indeed abandon ailing subsidiaries. Hence, both home and host supervisors have the natural incentive to prioritize policies that maintain adequate, capital and liquidity at the subsidiary level even if this increases the cost of finance as a consequence of trapped liquidity and capital pools.

But macroeconomic policies will be important too going forward. Given that much of the variability in foreign funding in the region is explained by the deposit base available to fund loans, limiting leverage in the banking sector by promoting the growth of aggregate saving through macroeconomic policies that do not lead to internal and external imbalances and through the development of domestic capital markets appear sensible medium term strategies. Firstly, maintaining external competitiveness will limit the extent with which countries have to borrow from the rest of the world. Secondly, a larger supply of long term finance would make economies more resilient to external shocks and at the same time, it would increase the resilience of the banking sector by providing a stable and long term source of funds as an alternative to volatile international sources. Finally, it would contribute to offsetting the increase in the cost of finance associated with the implementation of the global regulatory agenda. In this respect, progress needs to be made to further develop the supply of long term finance through private pension funds and life/annuity companies as well as develop private sector debt and equity markets.

Finally, regulatory measures aimed at improving the reliance on local and stable funding sources and preventing future reliance on FX funding will also be important. In particular more aggressive countercyclical use of the full set of macroprudential tools in line with IMF

(2012c and 2013c) and especially home-host cooperation to prevent circumvention of measures may be needed to prevent in the future accumulation of external imbalances associated with FX lending.

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Annex I – External Positions of BIS Reporting Banks (over GDP)

External Positions of BIS Reporting Banks (over GDP)

Country	As of 2012Q3			Change In 2012Q3			Change Since 2011Q2			Change Since 2008Q2		
	All Sectors	Non-Banks	Banks	All Sectors	Non-Banks	Banks	All Sectors	Non-Banks	Banks	All Sectors	Non-Banks	Banks
Croatia	54.45	27.18	27.27	-1.35	-0.28	-1.07	-8.82	-4.14	-4.68	-9.96	-5.04	-4.92
Slovenia	42.61	24.20	18.41	-2.07	-0.77	-1.30	-11.52	-2.25	-9.28	-20.45	3.22	-23.67
Estonia	40.90	9.33	31.57	-0.77	0.09	-0.86	-13.10	0.12	-13.22			
Latvia	39.78	9.97	29.81	-1.26	0.04	-1.30	-5.20	-0.42	-4.78	-25.42	-3.81	-21.61
Hungary	34.31	17.35	16.96	-2.04	-0.10	-1.94	-14.31	-3.07	-11.24	-25.33	-10.52	-14.80
Montenegro	31.64	22.56	9.08	2.43	2.48	-0.05	0.13	4.83	-4.70	6.63	14.21	-7.58
Bulgaria	27.85	13.86	13.99	-0.63	0.09	-0.71	-6.76	-2.47	-4.28	-7.39	-2.33	-5.06
Lithuania	25.36	7.29	18.07	-0.19	-0.13	-0.05	-5.35	-1.84	-3.51	-15.12	-7.58	-7.54
Slovak R.	25.02	14.50	10.52	1.32	0.43	0.89	6.40	2.29	4.11	2.03	4.97	-2.94
Romania	24.20	9.29	14.91	0.10	-0.07	0.17	-3.10	-1.44	-1.66	-5.22	-1.30	-3.92
Poland	21.16	10.06	11.10	-0.14	0.24	-0.38	-3.53	-0.46	-3.07	-1.76	-0.58	-1.18
Serbia	18.53	9.15	9.38	-0.35	-0.32	-0.03	-6.26	-2.59	-3.67	-6.38	-4.36	-2.02
BiH	18.17	7.15	11.02	0.25	-0.14	0.39	-1.58	1.74	-3.32	-5.59	1.60	-7.19
Czech R.	17.53	10.29	7.24	-1.58	-0.06	-1.52	-2.43	-0.34	-2.08	-5.58	-0.43	-5.15
Macedonia	13.58	6.07	7.52	1.09	0.53	0.55	3.28	2.02	1.26	7.60	3.40	4.19
Ukraine	9.49	4.42	5.07	-0.04	0.32	-0.36	-3.43	-0.16	-3.27	-10.22	-2.34	-7.88
Albania	7.87	4.67	3.20	-0.27	-0.12	-0.16	-1.78	-0.37	-1.41	3.89	2.88	1.01
Belarus	4.50	0.70	3.80	-0.22	0.09	-0.32	-1.72	-0.47	-1.26	-0.12	-1.08	0.96
Moldova	4.24	1.11	3.13	-0.35	-0.04	-0.31	0.23	-0.15	0.38	-2.58	0.35	-2.94
EE W.Av.	23.02	10.89	12.12	-0.48	0.07	-0.56	-4.28	-0.85	-3.43	-7.31	-1.70	-5.61

Notes: Exposure Data is FX Adjusted.

Sources: BIS Locational Statistics (Table 6), WEO, and authors' calculations.

Annex II – General outline of Basel III Basel Committee on Banking Supervision reforms - Basel III

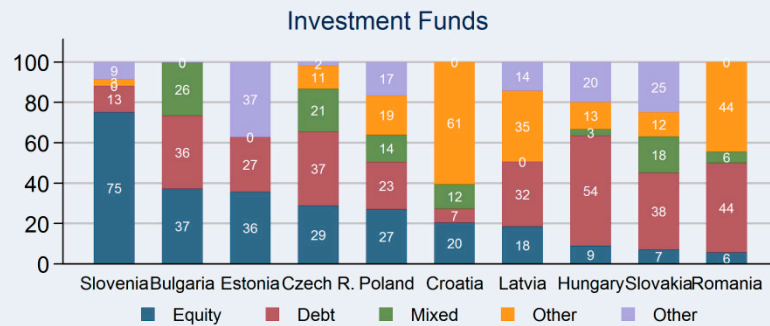
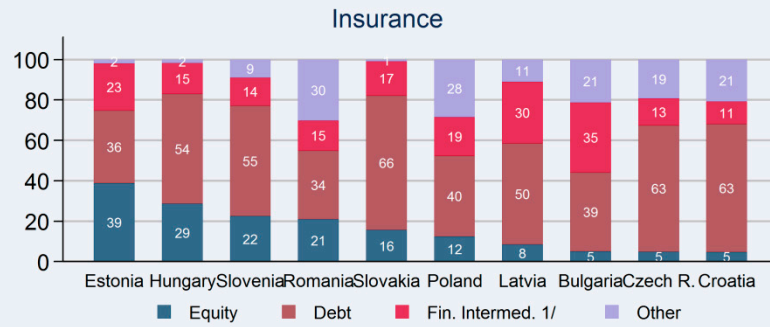
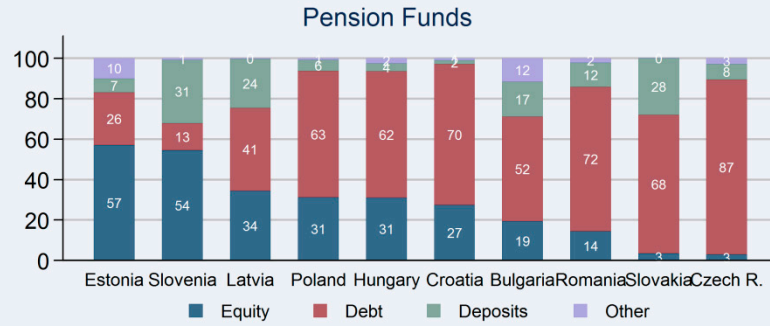
Strengthens microprudential regulation and supervision, and adds a macroprudential overlay that includes capital buffers.

Capital					Liquidity	
Pillar 1			Pillar 2	Pillar 3		
Capital	Risk coverage	Containing leverage	Risk management and supervision	Market discipline		
All Banks	<p>Quality and level of capital Greater focus on common equity. The minimum will be raised to 4.5% of risk-weighted assets, after deductions.</p> <p>Capital loss absorption at the point of non-viability Contractual terms of capital instruments will include a clause that allows – at the discretion of the relevant authority – write-off or conversion to common shares if the bank is judged to be non-viable. This principle increases the contribution of the private sector to resolving future banking crises and thereby reduces moral hazard.</p> <p>Capital conservation buffer Comprising common equity of 2.5% of risk-weighted assets, bringing the total common equity standard to 7%. Constraint on a bank's discretionary distributions will be imposed when banks fall into the buffer range.</p> <p>Countercyclical buffer Imposed within a range of 0-2.5% comprising common equity, when authorities judge credit growth is resulting in an unacceptable build up of systematic risk.</p>	<p>Securitisations Strengthens the capital treatment for certain complex securitisations. Requires banks to conduct more rigorous credit analyses of externally rated securitisation exposures.</p> <p>Trading book Significantly higher capital for trading and derivatives activities, as well as complex securitisations held in the trading book. Introduction of a stressed value-at-risk framework to help mitigate procyclicality. A capital charge for incremental risk that estimates the default and migration risks of unsecured credit products and takes liquidity into account.</p> <p>Counterparty credit risk Substantial strengthening of the counterparty credit risk framework. Includes: more stringent requirements for measuring exposure; capital incentives for banks to use central counterparties for derivatives; and higher capital for inter-financial sector exposures.</p> <p>Bank exposures to central counterparties (CCPs) The Committee has proposed that trade exposures to a qualifying CCP will receive a 2% risk weight and default fund exposures to a qualifying CCP will be capitalised according to a risk-based method that consistently and simply estimates risk arising from such default fund.</p>	<p>Leverage ratio A non-risk-based leverage ratio that includes off-balance sheet exposures will serve as a backstop to the risk-based capital requirement. Also helps contain system wide build up of leverage.</p>	<p>Supplemental Pillar 2 requirements. Address firm-wide governance and risk management; capturing the risk of off-balance sheet exposures and securitisation activities; managing risk concentrations; providing incentives for banks to better manage risk and returns over the long term; sound compensation practices; valuation practices; stress testing; accounting standards for financial instruments; corporate governance; and supervisory colleges.</p>	<p>Revised Pillar 3 disclosures requirements The requirements introduced relate to securitisation exposures and sponsorship of off-balance sheet vehicles. Enhanced disclosures on the detail of the components of regulatory capital and their reconciliation to the reported accounts will be required, including a comprehensive explanation of how a bank calculates its regulatory capital ratios.</p>	<p>Global liquidity standard and supervisory monitoring</p> <p>Liquidity coverage ratio The liquidity coverage ratio (LCR) will require banks to have sufficient high-quality liquid assets to withstand a 30-day stressed funding scenario that is specified by supervisors.</p> <p>Net stable funding ratio The net stable funding ratio (NSFR) is a longer-term structural ratio designed to address liquidity mismatches. It covers the entire balance sheet and provides incentives for banks to use stable sources of funding.</p> <p>Principles for Sound Liquidity Risk Management and Supervision The Committee's 2008 guidance <i>Principles for Sound Liquidity Risk Management and Supervision</i> takes account of lessons learned during the crisis and is based on a fundamental review of sound practices for managing liquidity risk in banking organisations.</p> <p>Supervisory monitoring The liquidity framework includes a common set of monitoring metrics to assist supervisors in identifying and analysing liquidity risk trends at both the bank and system-wide level.</p>
	SIFIs	<p>In addition to meeting the Basel III requirements, global systemically important financial institutions (SIFIs) must have higher loss absorbency capacity to reflect the greater risks that they pose to the financial system. The Committee has developed a methodology that includes both quantitative indicators and qualitative elements to identify global systemically important banks (SIBs). The additional loss absorbency requirements are to be met with a progressive Common Equity Tier 1 (CET1) capital requirement ranging from 1% to 2.5%, depending on a bank's systemic importance. For banks facing the highest SIB surcharge, an additional loss absorbency of 1% could be applied as a disincentive to increase materially their global systemic importance in the future. A consultative document was published in cooperation with the Financial Stability Board, which is coordinating the overall set of measures to reduce the moral hazard posed by global SIFIs.</p>				

Annex III – Investment Portfolios of NBFIs (details)

Figure 23. Investment Portfolios of NBFIs

(Percent of total AUM, end 2011)



Notes: 1/ Financial intermediation are assets held by insurance companies related to loans, including loans guaranteed by mortgages.
Sources: National authorities and authors' calculations.