

## FOREIGN BANKS IN CEE ECONOMIES: A COMPLEX RELATIONSHIP IN UNCERTAIN TIMES

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### Abstract

The entry and consolidation of foreign banks in Central and Eastern European (CEE) economies is remarkable, as they, in less than two decades, in different forms, motivations and rhythms, managed to attain dominant positions in the banking systems of these countries. Understanding the implications of this impressive presence is even more important, given that the effects of this presence during macroeconomic crises and shocks have brought again in the spotlight criticism regarding the risks of globalisation on the stability of national banking systems. Such renewed criticism could moderate the optimistic arguments of the importance of foreign banks as strategic investors, leading to the improvement of the banks' efficiency and quality of financial intermediation, lowering the cost of lending and stimulating the modernisation of banking systems. In this context, our paper examines the relationship between foreign bank assets (as a percent of the total bank assets) and certain banks' indicators, from 1996 to 2013, for several CEE countries by using fixed and random effect models with panel data. We found a positive and significant impact of foreign bank assets on the bank credit to the private sector, as percent of GDP. Likewise, an increase in the assets of foreign banks in the banking systems of CEE countries reduces the non-performing loans by 0.39 percent and the real interest rate (bank lending rate minus inflation) by 0.20 percent.

**Key words:** Foreign banks assets, CEE countries, bank indicators, crisis

**JEL Code:** G21, G01, E01

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### Introduction

There are several reasons or causes of banks' entry on foreign markets: the managerial decision for business opportunities and risk diversification (Wildmann, 2010; Claessens & Van Horen, 2014), profit-maximization and economies of scale, incentives in transparent and relatively non-interventionist institutional frameworks countries (Claessens & Van Horen, 2008), to gain new customers on new markets or to maintain (to augment) the relationship

with clients of the new markets exactly where they are rooted (“the *follow the customer* strategy”) (Konopielko, 1999; Buch, 2005), to increase cross-border volume of transactions and services diversification (Badulescu & Badulescu, 2008a). Whether we are talking about stages or forms of foreign banks' penetration into new markets - from establishing simple cross-border lending relationships to greenfield investment in the host country and local bank's acquisition (Badulescu & Morutan, 2016), the process of globalisation of banking can easily be divided in two main phases (from the 1990s until nowadays): the first phase, driven by the continuous growth of the local economies (up to 2007-2008), and the second phase, during and after the economic and financial crisis, with a trend towards stagnation and even a slight contraction (Claessens & Van Horen, 2014).

This paper aims to investigate the relation between the foreign bank presence in CEE countries (reflected by foreign bank assets) and several bank indicators between 1996 and 2013, by using fixed and random effect models with panel data. The paper is organized as follows: in the next (second) part we briefly review the literature analysing the effects of foreign banks' entry in CEE economies on the performance and macro-stability of emerging markets, in the third part we present the data, research methodology, and discuss the results; and finally we conclude by discussing the correlation between the amplitude of this presence and the main indicators which were analysed.

## **1 The effects of the foreign banks' entry on the emerging markets: a brief overview**

The literature on the role of foreign banks in the host countries' economies is diverse and often contradictory. Thus, foreign banks promote financial development providing high-quality banking services, influencing domestic banks to increase service quality, reducing costs and improve economic efficiency (Allen, Beck, Carletti, Lane, Schoemaker, & Wagner, 2011; Claessens & Van Horen, 2014), accelerate the process of harmonizing regulatory and supervisory procedures and standards (Onder & Ozyildirim, 2016).

Higher capitalization of foreign banks (compared to local ones) contributes to ensuring financial stability in the emerging banking systems of host countries. Foreign banks ensure the continuity of local business lending through parent banks' policy of providing cheaper external funding sources and supporting subsidiaries affected by transitory difficulties (Detragiache & Gupta, 2006; De Haas & Van Lelyveld, 2006; Allen, Beck, Carletti, Lane, Schoemaker, & Wagner, 2011).

However, these opinions are not unanimous, as foreign banks could deteriorate financial stability, weakening the position of the domestic banking system (Peek & Rosengren, 2000), generate unfair competition with domestic banks, speeding up their bankruptcy and widening the shock on domestic credit market, importing international crises onto fragile and less prepared emerging markets. Their superior efficiency stems from cherry-picking behaviours (Badulescu, Simut, & Badulescu, 2014), and it is limited to economic expansion stages and to certain types of bank-entries (Degryse, Havrylchhyk, Jurzyk, & Kozak, 2008; De Haas & Van Lelyveld, 2006). Referring to the case of CEE countries, De Haas & Van Lelyveld (2014) have found a greater variability in funding provided by foreign banks than that of domestic private banks during the 2008/2009 global crisis, even if a “disorderly capital flight from CEE through foreign - owned banks did not take place” (Epstein, 2017) and, within individual strategic decisions or bilateral and multilateral agreements with state financial authorities (as Vienna Initiative) foreign bank was a relative stable source of funding.

There are, however, fewer studies on the relationship between foreign banks and the macroeconomic stability of the host countries, even if the increased incidence and effects of the financial and banking crises at the end of the last century, and especially the scale of the recent crisis, determined academics, policy makers and the banking and business environment to seek the underlying causes of crises and their impact on the real economy. According to Monin & Jokipii (2010), the efforts focused on understanding the links between the characteristics of the banking sector and the medium and long-term economic growth and, on the other hand, the assessment of the costs of crises in the banking sector and, as far as possible, on the entire economy (Badulescu & Badulescu, 2008b).

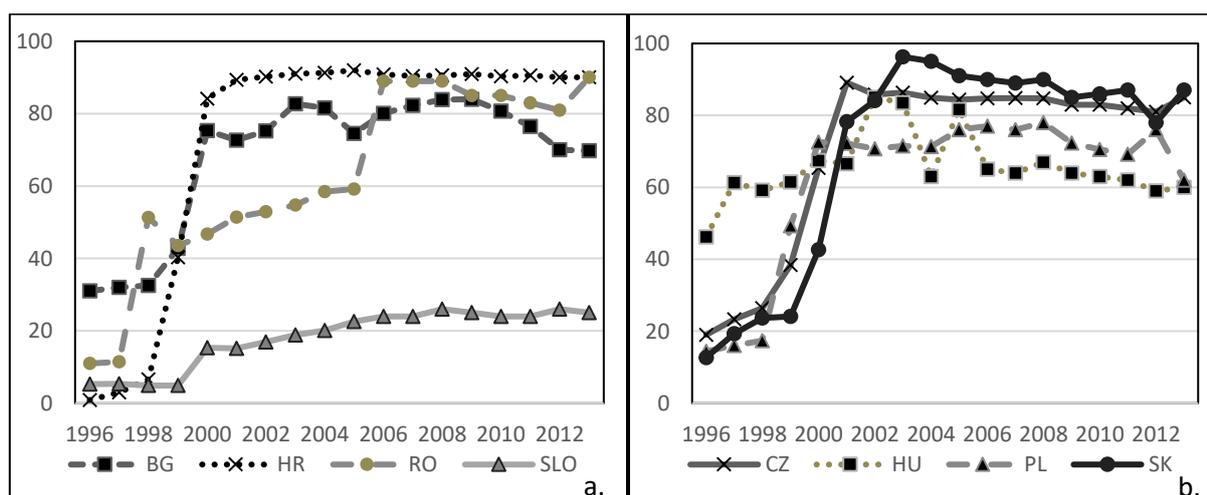
Thus, research has shown the link between the opening of the banking sector and economic growth (Levine, 2001), and the degree of development and sophistication of the financial sector stimulates economic growth (Demirguc-Kunt & Maksimovic, 1999). However, Petersen & Rajan (1995) or Claessens and van Horen (2014) indicate a negative effect of foreign bank presence on financial development, meanwhile Morgan and Strahan (2004) found zero or a positive association between foreign banks and macroeconomic volatility (in terms of GDP growth and real investment spending). Research has shown that bank crises correspond to or anticipate a substantial economic slowdown (Dell’Ariccia, Detragiache, & Rajan, 2008), even if it is difficult to find the direction of this correlation, i.e. whether financial banking crises are the cause, or the effect, of slowing down economic growth (Monin & Jokipii, 2010). Using a sample of 20 Emerging European countries from

1998 to 2013 Onder & Ozyildirim found that "an increase in the assets of foreign banks in the banking system reduces output and consumption growth volatility in general but does not significantly affect the volatility of investments" (2016, p. 447). Thus, the negative impact of the presence of foreign banks on CEE economies during the crisis is significant, but temporary. After the initial shock, they contribute to macroeconomic stabilization and post-crisis recovery.

## 2 Data, methodology and results

In this paper we used annual data for 8 (eight) Central and Eastern European (CEE) selected countries, for the period 1996- 2013. The variables employed in this paper are: foreign bank assets - as the exogenous variable, bank credit to the private sector (as percent of GDP), non-performing loans (as percent of all bank loans), real interest rate (bank lending rate minus inflation) – as endogenous variables. All the variables are measured in percentages and these were collected from the World Bank database (World Development Indicator) (2017) and EBRD (2018). In our study, "foreign banks" is the main variable of interest and is measured by the share of foreign bank assets in the total bank assets. Starting from this variable, we will examine the relationship between foreign bank presence and banks' indicators mentioned above for the CEE selected countries, in the period between 1996 and 2013.

**Fig. 1: Foreign bank assets as percent of the total bank assets in CEE, 1996 - 2013**



Source: World Bank database (World Development Indicator)

In Fig. 1 it can be observed that in the selected CEE countries (Bulgaria- BG, Croatia - HR, Romania - RO, Slovenia - SLO, Czech Republic - CZ, Hungary - HU, Poland - PL, Slovakia -

SK) the share of foreign bank assets in the total bank assets has increased significantly starting from 1998 – 1999. The highest increase was in Croatia (Fig. 1a.), where the share of foreign bank assets increased from 6.6% in 1998 to 80% in 1999, maintained at this weight for the entire analysed period, while in Slovenia (Fig. 1a.), the average share of foreign bank assets hardly exceeded 20% in the analysed period. In 2007-2008, after the outbreak of the crisis, share of foreign bank assets slowed down significantly in all the countries.

Since the estimation methodology applied in our analysis incorporates panel data, we will use the following model to examine the relationship between the foreign bank presence and the selected banks' indicators:

$$\ln(Y)_{it} = \alpha_{it} + \beta_1 \ln(X)_{it} + \gamma t + \varepsilon_{it} \quad (1)$$

where: Y is the endogenous variable, X is the exogenous variable, ln indicates natural logarithms,  $\alpha$  and  $\gamma$  are intercept parameters that vary across countries  $i$  and years  $t$ ,  $\beta$  is the coefficient of the exogenous variable and  $\varepsilon$  it is an error term. To determine whether the relationship between foreign bank presence and bank performance indicators changed during the financial crisis, we created interaction variables between Foreign Bank and year dummy variables (Year <sub>$i$</sub> ) (pre-crisis (Year<sub>2007</sub>), crisis (Year<sub>2008</sub>, Year<sub>2009</sub>) and post-crisis periods (Year<sub>2010</sub>)) (Onder and Ozyildirim, 2016, p. 455).

In the literature, either the fixed or random effect methods are used to estimate a panel data model. The fixed-effect model shows the relationship between the exogenous variable and the endogenous variable in which each individual component has a significant role in predicting the result in the system. While, in the case of the random effect model, the variance between entities is assumed to be random and uncorrelated with the exogenous variables included in the model. A first step in analysing panel data involves whether the differences between the fixed effects parameter estimator and the random effects parameter estimators are significant or not, and choosing a single method, that is, the most appropriate one (Wooldrige, 2002, pp. 289-290).

To determine which model is more appropriate for the data series, we used the Hausman test (1978). According to the Hausman test, if the null hypothesis is true, the estimator of random effects is efficient and the difference between the estimators must be close to zero. If the null hypothesis is rejected, the fixed effects is tested.

**Tab. 1: Panel data analysis**

	Endogenous variable		
	Bank credit to the private sector as percent of GDP (Y <sub>1</sub> )	Non-performing loans as percent of all bank loans (Y <sub>2</sub> )	Real interest rate: Bank lending rate minus inflation (Y <sub>3</sub> )
Hausman test	1.800832	12.994967	1.513950
Chi-Sq. Statistic [probability]	[0.77]	[0.0046]	[0.67]
Model	Random Effects	Fixed Effects	Random Effects
	Coefficient		
Intercept	2.922356 (8.96)*	3.592926 (5.66)*	2.568369 (8.79)*
Foreign bank assets	0.140997 (1.83)***	-0.399519 (-2.58)**	-0.201311 (-2.96)*
Year <sub>2007</sub> xForeign bank assets	-	-0.010209 (-3.22)*	-0.008259 (-2.93)*
Year <sub>2008</sub> xForeign bank assets	0.004995 (1.67)***	-0.010008 (-3.21)*	-0.004902 (-1.74)***
Year <sub>2009</sub> xForeign bank assets	0.005754 (1.87)***	-	-
Year <sub>2010</sub> xForeign bank assets	0.005972 (1.92)**	-	-
R-squared	0.09900	0.269977	0.150354
F-test	3.878463*	3.957072*	5.745679*
Number of observations (unbalanced)	144	118	139

**Note:** Sample period 1996 - 2013. Number of time periods (T) = 18. Number of countries (N) = 8. The terms presented in parentheses () denote t-statistics for the fixed effects (FE) model and z-statistics for the random effect (RE) model. \*, \*\* and \*\*\* denotes the levels of significance of 1%, 5% and 10%.

Source: World Bank database (World Development Indicator) and EBRD Banking Survey (European Bank for Reconstruction and Development)

The results presented in Tab. 1 show that only in the case of non-performing loans as percent of all bank loans the null hypothesis, which states that a random effect model is better than a fixed one, is rejected. In the other two cases (bank credit to the private sector as percent of GDP and real interest rate) we cannot reject the null hypothesis stating that a random effect model is better than a fixed one because the Prob. Chi-Sq. > 0.05. Thus, for non-performing loans (as percent of all bank loans) the fixed effect model is preferable, so we can assume that in this case the countries' behaviour is different. For the other two variables,

bank credit to the private sector and real interest rate, we can assume that the countries behave similarly, the evolution of these indicators being more alike during the analysed period), therefore the random effects model is chosen over the fixed effects model.

The results show that foreign bank assets (as percent of the total bank assets) are positively and significantly associated with the bank credit to the private sector (as percent of GDP) at 10% level. Although in the analysed period, the credit to the private sector increased in CEE selected countries, major differences exist between these countries with respect to bank lending to the private sector. In Bulgaria, Croatia, Czech Republic, Hungary, Slovenia and the Slovakia the average ratio of private sector credit to GDP is 40% or higher, while in Poland the average ratio is 32% and in Romania is only 22.12%. Although in Romania the average of foreign banks assets was over 70% during the period 1996-2013, the credit to the private sector remained relatively low. Foreign banks grant more to the private sector than domestic ones and have a higher level of profitability compared to national banks.

Another indicator that significantly affected the banking system and is important to study in relation to the foreign banks is the non-performing loans. This indicator is important because it reflects asset quality, credit risk and the efficiency of allocating resources to productive sectors. Thus, starting from this indicator, we investigated the response of non-performing loans to the change of the foreign bank assets. The result indicates that an increase in the assets of foreign banks in the banking system reduces the non-performing loans of selected Central and Eastern European countries by 0.39 percent.

The real interest rate (bank lending rate minus inflation) represents another bank performance indicator taken into account in this study. The foreign banks' assets are negatively correlated and statistically significant in association with real interest rate at 1% level. So, if foreign bank assets increase by 1 percent, the interest rate decreases by 0.20 percent. We found that, during the financial crisis the foreign bank assets increased credit to the private sector and decreased to a lesser degree the non-performing loans and real interest rate, than during the normal period, but this impact seems to be temporary, until 2009. Therefore, credit to the private sector increased only by 0.00049 percent in 2008 compared to 0.14 percent in the analysed normal period. Also it can be observed that the increase in the assets of foreign banks in the banking system during the financial crisis reduced the non-performing loans and the real interest rate less than the normal period. If in the normal period the non-performing loans decreased by 0.39 percent at an increase by 1% of foreign bank assets, during the financial crisis, the non-performing loans decreased only by 0.01%.

## Conclusion

The substantial presence of foreign banks in the banking systems of transition economies (and especially in CEE countries) is of great interest to academics, policy makers, and the banking and business environments in order to understand and assess the effects of this presence on the solidity and involvement in financing national economies. It is also important to identify how macroeconomic development depends on or influences the functioning and strength of the banking system. Starting from a dataset for eight CEE selected countries, for the period 1996- 2013, our paper has analysed the relationship between foreign bank presence and several economic and bank's market indicators. We found a positive and significant impact of foreign bank assets on the bank credit to the real economy. Hence, an increase in the assets of foreign banks in the banking systems of CEE countries reduces non-performing loans by 0.39 percent and foreign banks assets are negatively (and statistically significantly) correlated with the real interest rate. Moreover, we noticed that in the first phase of the recent financial crisis, foreign bank assets contributed less to an increase in credit to the private sector and to a decrease in non-performing loans and real interest rate, compared to the rest of the analysed period, aspects confirmed by most of the recent studies and researches on the topics.

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