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Foreign Direct Investment in the Banking Sector: A Transitional Economy Perspective

Luca Papi - Debora Revoltella

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Foreign Direct Investment in the Banking Sector:

A Transitional Economy Perspective [1]

by

Luca Papi * and Debora Revoltella**

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Abstract: In this paper we use new statistics on Foreign Direct Investment (FDI) in Transitional Economies (TEs) to analyze the issue of foreign ownership in the banking sector, examining the implications for the host banking sector. After considering the potential benefits and risks associated with foreign investment in the banking sector, and on the basis of some empirical results, we reach the conclusion that FDI provides valuable opportunities for the development of the host banking sector. We find that foreign investment is associated with higher profitability; however, a substantial foreign ownership is necessary if there is to be a positive effect on cost efficiency. We also analyze the determinants of FDI location choices in TEs providing new empirical evidence, and distinguishing among different levels of foreign partnership.

Keywords: FDI, banking sector, transitional economies.
JEL Classification: G21, F36, E44.

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* Department of Economics, University of Ancona, Italy. Email: Papi@deanovell.unian.it
** Department of Economics, Bocconi University, and Banca Commerciale Italiana, Italy. Email: drevoltella@bci.it

I. Introduction

The literature on Foreign Direct Investment (FDI) has grown significantly over recent years. Explanations of this substantial growth relate to the increase in the global flow of FDI, and to the search for the forces that propel the ongoing economic and financial integration of the world economy. However, this growing literature has paid very little attention to the services sector, and in particular to financial services. There are two main reasons for this lacuna. First, the theory has yielded only limited insights into the service sector, and second, data problems are particularly severe with regard to services. This defect is increasingly troublesome in view of the growing importance of services in production, trade, and investment.

There is an even greater lack of information concerning the banking sector. Only meagre and scattered statistics are available on FDI in the banking sector, and when the issue has been analyzed, the emphasis has been exclusively on foreign banks, while minority investments in domestic financial institutions have been ignored. Moreover, most of these studies have examined the role of foreign banks from a single foreign bank perspective, looking for the best growth strategy and paying very little attention to the impact of FDI on the host country banking sector. Other national studies, prompted by concerns about their own banks' overseas competitiveness, have investigated their influence in international markets.

The available literature is also biased from a geographical point of view. Previous studies on the reasons for the expansion of international banking have mainly focused on the movement of banks across developed countries (see, inter alia, Goldberg and Johnson 1990, Ursacki and Vertinsky 1992). By contrast, very few studies have dealt with developing countries and transitional economies (TEs).[1] This lack of studies on FDI in the banking sector

[1] Some studies have analyzed the role and determinants of FDI in TEs (Lansbury et al. (1996), Wang and Swain (1995) and Lankes and Stern (1998), but no attention has been paid to FDI into the financial sector. Comparative analysis of foreign and domestic banks are provided in Claessens et al. (1999) and Sabi (1996).

of TEs is even more significant in the light of the considerable expansion and penetration of international banking into TEs.

The purpose of this paper is to overcome some of the above-mentioned shortcomings of the literature, and to analyze the issue of foreign ownership in the banking sector, using new statistics on FDI in TEs and investigating the implications for the host country in a transition economy perspective. Our analysis proceeds through two stages. First, we examine whether FDI in the banking sector of TEs provides special advantages for host countries. After considering the potential benefits and risks associated with foreign investment in the banking sector, and on the basis of some empirical results, we reach the conclusion that FDI does provide valuable opportunities for the development of the host banking sector, and for the host economy as a whole. Second and consequently, we seek to identify the factors that determine the decision to invest in the banking sectors of TEs.

The paper is organized as follows. This introductory section is followed by section 2, which examines the special benefits and risks of FDIs in TEs, and reviews the meagre evidence on the effects wrought by the internationalization of banking sectors. Section 3 presents some data on FDI towards countries in transition and describes our new data set of foreign investment in the banking sectors of TEs. Using individual bank data, Section 4 provides some empirical evidence on the role of FDI in promoting financial development in the host countries, and Section 5 presents the empirical results on the determinants of foreign entry into TE banking sectors. Section 6 concludes and discusses policy options for sustaining foreign investments in banking sectors.

II. FDI in the banking sector: Are transitional economies special?

Very few studies have focused on the role of FDI in the banking sector of TEs. This is a remarkable oversight, for the banking sectors of TEs are special, and there exist a number of reasons to believe FDI could favor the institutional and economic development of TEs, in addition to those stressed by the traditional approach of international economics. Compared to other economies, TEs differ in terms of their specific banking environments, histories, and the structure of their economies.

The banking environment in TEs is special for several reasons. First, in most TEs the government maintains a pervasive presence in the banking sector. Second, poor financial and legal infrastructures are a common feature of TEs. Third, in the initial stage of transition there are relatively narrow sets of potential business clients, although some markets have highly promising prospects in the medium and long-run. Finally, some authors have pointed out the mis-functioning of credit markets in TEs. In particular, during the initial stage of the transition process, liquidity constraints on firms are worsened by a chronic insufficiency and misallocation of bank credit (Calvo and Coricelli 1994).

The specific political history of TEs also makes them interesting to analyze. It is a matter of fact that the evolution of the foreign owned component of the banking sector reflects only recent strategies and policies, with very minor constraints from the previous structure. The central planning lasted so long that all previous links with other market economies were severed. This feature makes TEs different from many developing countries, whose colonial legacy has significantly shaped the structure of their banking sectors.

The economic structure of countries in transition is also peculiar. TEs were initially characterized by developed industrial sectors and underdeveloped financial sectors entirely

inadequate to function in a market economy. Consequently, their financial and banking sectors have been rebuilt from scratch; a feature reflected in a marked discrepancy between the real sector development stage and a new and laggardly financial sector which has been able to fill this gap only partially.

In addition to the above-mentioned specific reasons relative to TEs, we would stress that most of the benefits that the literature has coupled with foreign bank entry become even more relevant in a transition perspective. For instance, the likely improvement of human capital due to foreign bank presence is particularly important for TEs, where the skills required for the banking business are usually scarce, especially during the first years of transition. As for increased competition, it should be borne in mind that, at the beginning of transition, the creation of a two-tier banking system has produced a domestic oligopolistic market structure in almost all TEs. The entry of foreign banks may therefore significantly reduce the market power of domestic banks in some segments of the market. Another example concerns access to international capital markets: this is crucial for TEs, which enjoyed very little access to international financial markets during the centrally planned period. Moreover, benefits may also arise in the field of financial regulations; FDI can affect regulatory policies and indirectly improve the efficiency of the legal and regulatory framework by facilitating the adoption of Western standards of financial regulation and supervision (Levine 1996). Last but not least, foreign intervention can increase the financial strength of foreign-participated banks through the capitalization of domestic institutions, and help to resolve internal difficulties through the acquisition of problem banks.

Of course, there are also risks and costs associated with foreign entry into the banking sector. However, most of the arguments for restraining foreign participation in the banking

sector put forward in the literature[2] seem to have shaky economic foundations and have not been corroborated by rigorous empirical evidence. And again some arguments appear even less convincing when referred to TEs.

The main argument against foreign participation in banking cites the well-known "infant industry issue" which entails a fear of domination by foreign banks, especially when foreign banks' strategy leans towards retail banking. In some countries, and probably in TEs as well, depositors may have more confidence in the security provided by foreign banks, putting domestic banks, especially the new ones, at a marked disadvantage (Stiglitz 1993). However, it is likely that foreign banks find it more difficult to enter retail markets in the first years of transition, mainly because of information barriers[3]. Consequently, the risk of domination, if any, may occur only in the long run, when domestic banks have had enough time to adjust to the higher level of competition.

A second argument is that governments are better able to control indigenous banks compared with foreign ones. However, the validity of this statement seems less convincing in the transition country perspective. Due to the weak legal system and to higher uncertainty and discretion in the interpretation and enforcement of the existing laws and regulations of transition countries, it is quite likely that foreign banks operating in transition countries will be more careful and circumspect in observing local policy regulations than are foreign banks in other countries. Moreover, bank regulators in TEs can apply rules to the new foreign entrants, but meet more difficulties to do so with politically powerful local bankers.

A third issue is capital outflow. The risk here is that foreign banks may compete for local deposits and channel the funds outside the country, thanks to their closer ties with the

[2] For a recent review of the arguments against foreign bank entry see Bonin et al. (1998).
[3] Konopielko (1999) presents the results of a survey conducted among leading banks investing in TEs to identify those main areas of activity in which foreign banks operate. Interestingly, among the eight areas of activity covered in the survey, retail activities are perceived as being the least important.

international financial community. Again, this concern tends to be over-emphasized in the literature, and convincing evidence of the existence of more volatile behavior of foreign banks has yet to be provided[4].

A fourth reason has to do with the portfolio structure of foreign banks versus domestic banks. In TEs foreign banks may have some difficulty in assessing the emerging private sector, mainly small enterprises; conversely, foreign banks may be better informed on multinational firms and therefore direct funds to the local subsidiaries of multinational firms rather than local enterprises.

Finally, the argument in favor of discriminating practice is based on the issue of reciprocity as a potential bargaining tool to secure better treatment for domestically-owned banks in foreign markets. This argument should be even less relevant in the TE case, for two reasons. First, domestic banks in TEs are usually not strong, big and experienced enough to consider foreign expansion. Second, the bulk of the economic and financial links of the major European TEs are with EU countries, with regard to which the reciprocity issue loses its relevance, given the EU financial principles on banking among EU countries.

All in all, based on the considerations mentioned above, the efficiency gains for the economy as a whole deriving from a financial liberalization which allows foreign banks to operate in a transition country should outweigh any cost or risk associated with a foreign presence in the banking sector.

Unfortunately, very few studies have sought to quantify the impact of foreign participation on the efficiency of the host banking sector, and to measure the presumed benefits arising from foreign entry into the sector. However, the scattered and descriptive empirical evidence available on this matter seems to corroborate the positive influence of

[4] Conversely, in some TEs, FDI into the banking sector may result in such a large amount of capital inflow that

foreign banks on the host country. For instance, Bhattacharaya (1993) found that foreign banks improved access to foreign capital with which to fund domestic projects in Pakistan, Turkey, and Korea. Terrel (1986) compared bank performance in countries which permitted entry of foreign banks with that of countries which excluded any direct foreign bank entry. Based on 14 OECD countries, Terrel's findings showed that banks chartered in countries which excluded foreign participation in their banking sectors tended on average to be more profitable and less efficient, earning higher gross margins and pretax profits, and having higher operating costs. In a more recent and systematic study, Claessens et al. (1999) have provided new and wider evidence on how a foreign bank presence affects the domestic banking sectors in 80 countries. Their results show that an increased foreign bank share reduces domestic bank profitability and overhead expenses. Interesting for our study, they also show that the behavior of foreign relative to domestic banks is very different in developing and developed countries, with foreign banks achieving higher profits than domestic ones in developing countries and vice versa. This points out that the determinants for foreign entry differ significantly among different kinds of countries, and provides further stimulus to investigate and treat the TE experience as a special case.

III. Data on FDI in TE banking sectors

The transition towards market economies of former centrally-planned economies has radically changed the volume and composition of their capital flows. At the beginning of the transition process, capital flows mainly took the form of official lending. Later on, as macroeconomic performance and the transition process progressed, private capital flows started to enter the TEs, first slowly and then so rapidly that in 1993 private flows exceeded net official flows for the first time. As in many other countries, capital flows into TEs have followed a distinct

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may even affect the exchange rate level significantly.

sequence of official funds, FDI, commercial loans, dedicated equity funds, and finally direct local stocks and money market instruments.

Table 1: FDI inflows and outflows (1994-1996)

Year	Developed countries		Developing countries		Transitional European countries	
	Inflows	Outflows	Inflows	Outflows	Inflows	Outflows
	Billion of US Dollar					
1994	142.3	209.7	90.4	40.7	5.8	0.7
1995	205.8	291.2	96.3	47.0	14.3	0.4
1996	208.2	294.7	128.7	51.5	12.2	0.6
	Share in total (percent)					
1994	59.7	83.5	37.9	16.2	2.4	0.3
1995	65.0	86.0	30.4	13.9	4.5	0.1
1996	59.6	85.0	38.9	14.8	3.5	0.2

Source: UNCTAD (1998)

Despite the recent and rapid growth of capital flows into TEs, and with some caution required by statistical problems,[5] we can say that the TEs' performance in attracting FDI has been weak by global standards. This is shown in Table 1, which presents data on FDI inflows and outflows by world region.

Information on FDI by country is set out in Table 2. Hungary was the first country to receive significant FDI after 1991. Poland instead started to receive external flows later, becoming the leading destination in 1996 and 1997. Recently, Hungary and Poland have been the main recipients of FDI among TEs with total inflows of USD 15.4 and 8.4 billion, respectively, over the 1993-1997 period.

Table 2: FDI inflows in TEs

(Million of US Dollar)

	1993	1994	1995	1996	1997	1993-97	FDI/GDP 1997
Czech Republic	552	749	2526	1388	1275	7473	2.4
Estonia	157	215	199	111	128	810	2.7
Hungary	2339	1097	4453	1986	2100	15403	4.6
Latvia	40	238	180	210	347	1058	6.3
Lithuania	30	31	65	127	218	471	2.3
Poland	580	542	1134	2741	3044	8442	2.2
Romania	97	341	417	263	1224	2470	3.5
Slovak Republic	107	236	194	199	51	1003	0.3
Slovenia	111	128	176	186	321	1074	1.8

Source: EBRD (1998).

The data reported in Table 1 and 2 refer to total FDI without distinctions by economic sector. Unfortunately, disaggregated data by sector are scattered and difficult to obtain, and practically no information is available for FDI in the banking sector from international statistical sources.[6]

An exception is the paper by Claessens et al. (1999) which gives data on the number of foreign banks and their total assets share in 80 countries.[7] On the basis of this study, one

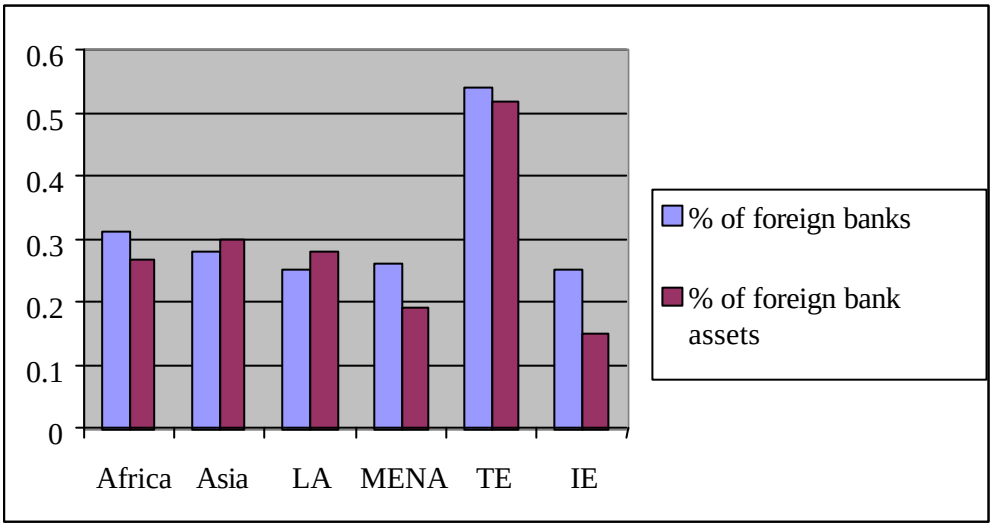
[5] Unfortunately, there still exist data problems in measuring capital flows in TEs. In particular, FDI statistical measures vary significantly. See UNCTAD (1998) for a detailed report on the situation of FDI statistics by individual country.

[6] OECD data register FDI flows disaggregated by sector and country, but most TEs are not OECD members.

[7] Claessens et al. (1999) use financial information from the BankScope data base, which on average accounts for 90 percent of bank total assets in each country. The period analyzed is 1988-1995.

notes that, although TE share of total FDI remains small, both in terms of flows and stocks, FDI into TE banking sectors is relatively and surprisingly high. Chart 1 reports the shares of foreign banks in domestic banking sectors by world region. Compared to other regions, the TE share stands out as the largest. Moreover, penetration by foreign banks in TEs also appears to be very high, as can be seen from the comparison between the asset share and the number of foreign banks in TEs with *r*espect to other countries.

Chart 1: Foreign banks penetration by world regions *



** Average figures over the 1988-95 period. LA: Latin America; MENA: Middle East and North Africa, TE: Transition Economies, IE: Industrialized Economies*
Source: Claessens et al. (1999)

However, Claessens et al. (1999), as well as the entire literature on FDI in the banking sector, share the limitation of focusing exclusively on foreign banks. Definitions of foreign banks usually exclude all those banks which have a foreign participation amounting to less than 50 percent of the bank capital. This exclusion is significant in light of the ceilings imposed on foreign ownership by some TEs in recent years. In our sample of countries, which contains data on nine Central and Eastern European Countries (CEECs), this definition of

foreign banks excludes roughly 50 percent of FDI. Moreover, the usual data on foreign banks, like those presented in Claessens at al. (1999), do not provide information on the investor bank and the investor country. Consequently, they cannot be used to analyze FDI flows and to explain their determinants.

Our new database "FDI in the CEECs" instead considers all FDI initiatives by a foreign bank in nine Central and East European Countries[8] during the period 1989-1997. The database also includes investments in minority stakes, and it integrates financial statement information for each bank, retrieved from the Bankscope database provided by IBCA, with information on the foreign partnership by recording the name and the country of origin of the investor bank, the year in which the investment initiative took place, and the equity share of the investor. It thus provides useful insights for analysis of both the impact of FDI in the banking sector, and the determinants of foreign bank investment strategies. The database has been collected under the European Commission DGIII sponsorship. Our database represents the most comprehensive compilation to date of the number of FDI in the TE banking sectors. Information on FDI initiatives were collected from investment agencies in the CEECs and from specialized newspapers, and they have been double-checked with central banks. The total number of observations is 250, which means that 250 investment initiatives from a western bank into East European ones have been detected. The data refer only to FDI represented by equity capital (with at least a 10 percent stake in a local bank), and do not include the other two categories of FDI, namely reinvested earnings and intra-company loans. By recording each investment initiative, our database does not discriminate between large and small banks and allows us to draw conclusions on localization decisions of foreign banks, without any bias due to the size of the acquiring bank or the entity of the investment

[8] The analyzed TEs are nine Central and East European countries, namely: Hungary, the Czech Republic, Poland, Estonia, Latvia, Lithuania, the Slovak Republic, Slovenia and Romania.

initiative. However, our data set does not provide information on the organizational structure of the investment; recorded FDIs could be green-field projects or acquisition; foreign bank branches are not considered as FDIs.

Table 3 – Number of FDI in the banking sector by host country*

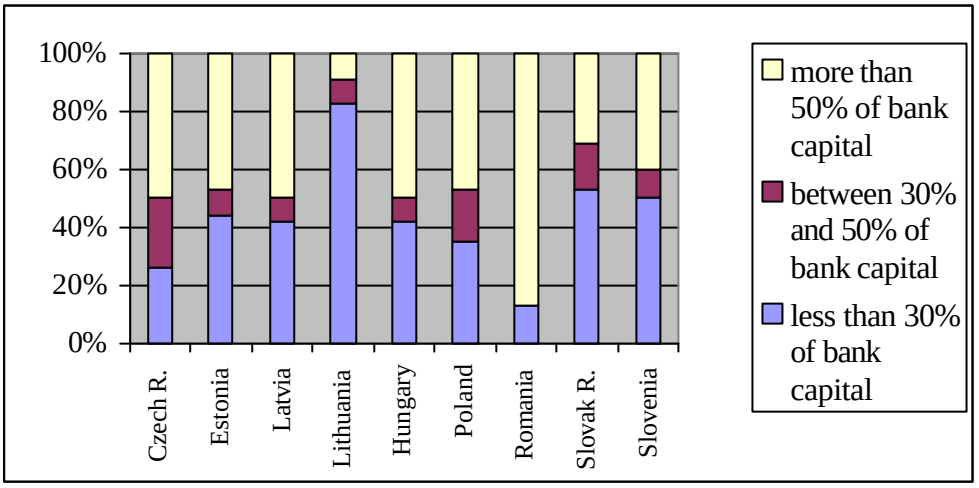
	1989	1990	1991	1992	1993	1994	1995	1996	1997	NA	Total
Czech Republic	0	0	7	11	15	22	26	28	30	4	34
Estonia	0	0	0	2	4	10	21	24	24	8	32
Hungary	7	11	17	20	22	29	36	43	46	3	49
Latvia	0	0	0	2	6	6	7	11	11	12	23
Lithuania	0	0	0	0	4	4	6	8	8	5	13
Poland	0	2	8	12	14	27	31	39	44	13	57
Romania	0	0	0	0	1	5	10	15	15	1	16
Slovak Republic	0	0	1	2	6	11	14	15	15	1	16
Slovenia	0	0	0	2	2	4	7	7	7	3	10
Total	7	13	33	51	74	118	158	190	200	50	250

- *Cumulative data. NA when there is no information about the year of the investment.*

Table 3 shows that Hungary was the first country to receive significant investments in the banking sector. In 1991 and 1992 some investments were directed to the Czech Republic and Poland. Only later did foreign banks start investing in Estonia and in the other TEs. FDI from Western banks is mainly localized in the Czech Republic, Poland, Hungary and in Estonia; all these countries have already started negotiations to join the EU, and they seem to have the most advanced banking sectors in the region. In these countries FDI prevalently involves the acquisition of a majority stake in local banks (see Chart 2), while foreign financial institutions hold a minority stake (less than 30 percent) in all the other countries,

with the exception of Romania. This both shows the prudent stance of foreign institutions, which look for a minor role in less stable markets, and reflects limits in market entry rules and delays in the privatization process.

Chart 2: FDI in the banking sector – foreign stockholder class by host country in 1997



Source: "FDI in the CEECs" database.

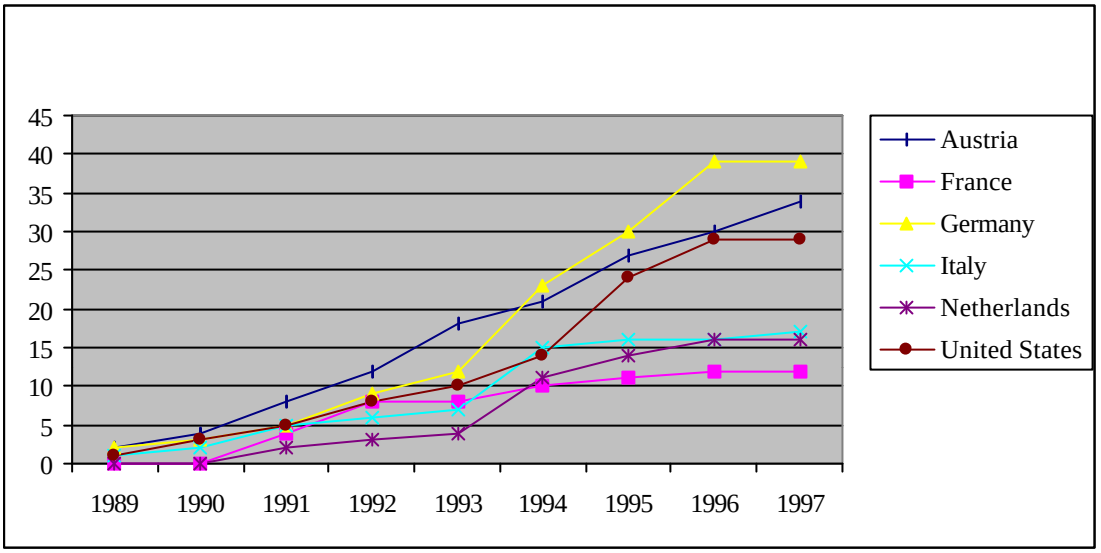
Comparison of different transition and development indicators[9] shows that Hungary and Estonia are the two TEs which have progressed most in privatizing and reorganizing the banking sector, followed by Poland, the Czech Republic, Latvia, and Lithuania. This confirms that the successful transformation of financial markets and bank privatization are important prerequisites to attract investments (Bonin et al. 1998, Claessens et al. 1999). Only in late 1998 Slovenia, Slovakia and Romania began privatization of their large banks. In Slovenia and Lithuania, discrimination practices against foreign banks lasted until very recently, and substantial protection was granted to local banks. By contrast, there seems to be less

[9] See, for instance, EBRD transition indicators (EBRD Transition Report, 1998), Index of Economic Freedom Indicator (Index of Economic Freedom 1998), and World Bank Indicators.

discrimination in Hungary, Estonia, Poland, and the Czech Republic, although significant differences exist in the liberalization process adopted in those countries.

Chart 3: FDI in the banking sector in TEs – by main investor countries

(number of FDI)



Source: "FDI in the CEECs" database.

Although differences exist among countries, large bank privatization has been delayed in all CEECs during the first years of transition. In 1996, only three large local banks had a majority foreign ownership (more than 50 percent), 14 large banks had a minority foreign partnership (lower than 50 percent), and 14 did not have any foreign partnership.

From a foreign country perspective, the first country to invest in the TEs was Austria, followed by Germany. Although German banks were among the first investors, the large wave of German investments arrived only in 1993, probably due to internal problems caused by reunification. Germany is now the most important investor in the region, followed by Austria, USA, the Netherlands, and Italy (Chart 3).

IV. Impact of FDI in the banking sector

In order to investigate the role of foreign participation in the host banking sector we follow the bottom-up approach used by Lindgren, Garcia and Saal (1996) in evaluating banking system stability. We thus search for evidence of gains in overall performance due to a foreign partnership at the single bank level, and then we extend the result to the overall banking system.

Our analysis considers all investments in indigenous banks, including those with minority stakes in the host bank capital during the period 1993-97. During that time many banks in TEs were restructured or recapitalized and often this involved restating balance sheets to reflect the true value of loan assets. In order to reduce the sensitivity of the analysis to restructuring, we considered for each bank, both in the descriptive and in the econometric analysis, average balance sheet indicators for the 1993-1997 period. Therefore, only those banks with complete information throughout the 1993-1997 years have been included in our study; in so doing our sample amounts to 112 banks in the nine TEs.

A first descriptive analysis compares some balance-sheet indicators from the Bankscope database provided by IBCA, distinguishing among banks with and without foreign partnership (Table 4). The data reported in Table 4 reveal some clear differences between domestic banks and banks with foreign participation (BFPs)[10] [11]. For instance, BFPs tend to be more involved in non traditional operations, and to rely less on interest revenues. This can be seen if one looks at the higher level of other operating income (OOIA) and at the lower net interest revenues (NIRA) of BFPs with respect to domestic banks. This attitude may reflect

[10] The term BFP is used here to comprise both domestic banks with a minority foreign participation, and foreign banks (with a stake of no less than 50 percent of the bank capital).
[11] FOR1=1 in Table 4 refers to all banks in our sample without distinguishing between countries.

various penetration strategies of BFPs, focusing on selected clients and on wholesale rather than on retail transactions, and specializing in those niche markets that require competencies that local banks do not usually have. BFPs are also characterized by a less risky loan portfolio, as the lower ratio of average loan loss reserves to gross loans shows (the difference in means is statistically significant at the 5 percent confidence level). However, based on our data, we are not able to discriminate about the cause of such a better loan quality; it might depend both on a different kind of borrower, and greater abilities in evaluating credit risk by BFPs. In any case, the higher incidence of credit quality problems in domestic banks implies more severe policies in terms of provisioning, which in turn reduce profitability. Interestingly, BFPs display a more rapid growth of their loan portfolio; this is an interesting feature because it has often been argued that foreign banks would neglect domestic borrowers' needs.

Table 4: Foreign shareholding and balance sheet indicators

	ROA	NIRA	OOIA	OVERTA	LLRGL	DNLTA	SIZE
FOR1=0	1.28	7.19	3.33**	0.04*	10.87**	0.14	5.90**
FOR1=1	1.55	6.45	3.44**	0.05*	8.75**	0.18	5.47**

*ROA: Return on Average Assets; NIRA: Net Interest Revenue over Total Assets; OOIA: Other Operating Income over Total Assets; OVERTA: Overhead Expenses over Total Assets; LLRTA: Loan Loss Reserves over Total Assets; LLRGL: Loan Loss Reserves over Gross Loans; DNLTA average annual growth rate of net loans over total assets; SIZE log Total Assets; FOR1: foreign partnership dummy: this is 1 when a foreign partnership is detected, 0 otherwise. ** and * indicate significance levels of 5 and 10 percent, respectively.*

Finally, BFPs tend to have on average a larger size and a higher incidence of overheads. The size is mainly a consequence of delays in the privatization process of large banks (as previously mentioned, only three large banks were privatized through foreign capital inflows during the analyzed period). The cost effect may be determined by the fact that we consider as a FPB any institution with foreign partnership, thus including also minority investments,

which are not likely to produce significant savings in terms of costs. Moreover, most new banks in TEs are foreign-owned, and usually new banks tend to have higher operational costs during the first years of activity.

To analyze further the relationship between foreign partnership and bank performance we estimated some simple regression equations in order to investigate whether bank performance is affected by the presence of foreign participation. Moreover, we carried out a sensitivity analysis in order to find out what degree of foreign participation, if any, is required to affect bank performance positively. In particular, we consider two different dependent variables, in order to account for differences in profitability and cost efficiency, namely:

- an indicator for overall profitability (ROA, return on total assets);
- a proxy for operating efficiency (OVERTA, overheads over total assets);

All equations were estimated as a cross section. Using balance sheet data averaged for the 1993-1997 period for each bank, the performance is assumed to be influenced by structural characteristics unique to each bank, as well as features of the country in which the bank operates. Using variables over a four-year period should insure the reduction of risk of mismeasurement. In particular, our dependent variables are explicated by the following model:

$$PREF = a + \sum b_i FSV_i + cSIZE + dFOR + CD + e$$

where *PREF* stands for three different dependent variables (proxies for profitability and cost efficiency), and *FOR* is our measure of foreign participation to analyze the impact of different levels of foreign ownership[12]. *SIZE* is the logarithm of total assets and it is important because

[12] Dummies for foreign shareholdings between 10 percent and 100 percent were considered; however only FOR3, FOR5 and FOR7 are presented. Each dummy has been specified in order to account for a foreign stake larger than a set value; for example, FOR3 accounts for all foreign shareholdings larger than 30 percent. In each

economies of scale may enable larger banks to achieve greater levels of efficiency and profitability. *FSV* is a set of three additional bank-specific financial indicators to control differences in our dependent variables that may be due to other characteristics of the individual banks in our sample. In particular, as financial indicators we included the following: net loans over total assets (NLTA), equity over total assets (ETA), and the ratio of other operating income to net interest revenue (OOINIR). NLTA is included as a measure of bank risk. Loans and securities are the two main assets held by banks and because loans generally are riskier than securities, loans should yield a greater return, and therefore profitability should be positively associated with the proportion of portfolio invested in loans. ETA is a measure of financial solidity which in turn might affect bank profitability and cost efficiency. A high capitalization ratio, and thus a higher franchise value, should provide bankers with the right incentives to lend and operate prudently; we therefore expect a positive relationship between ETA and profitability[13]. The third firm-specific variable is OOINIR which is a proxy for the degree of specialization in non-traditional banking activities; non-traditional activities may require both higher operating costs and generate a higher level of income compared to more traditional activities. Finally, *CD* are country dummies introduced to take account of different legal, regulatory, and macroeconomic features which could influence bank performance.

The estimation results are presented in Table 5. All our control variables, except OOINIR, are significant with the expected sign. In all specifications foreign participation is positively linked to the profitability of banks in TEs, whatever the level of foreign

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equation we introduced both a foreign partnership dummy and the constant (thus the complementary dummy – foreign partnership lower than the set value – is dropped); all equations are independently estimated.

[13] Various channels should justify the existence of a positive relationship between the level of capitalization and profitability; for instance, depositors should require a lower interest rate on deposits when banks are less risky, and the operating efficiency should be higher when bankers have a greater amount of capital at stake.

shareholding is. This result is consistent with what Claessens et al. (1999) find for less developed countries[14], suggesting that in this respect TEs are more similar to developing countries than developed ones. Turning to cost efficiency, our estimates indicate that foreign partnership is negatively related to our proxy of operating inefficiency; however, a significant sign is detected only when foreign shareholding exceeds 70 percent, suggesting that foreign banks get positive results in the restructuring process of the BFPs only when they acquire a strong majority share[15].

However, we should note that no causality is tested in the above estimated equations, and thus the impact of foreign partnership on bank performance could also be interpreted the other way around, namely that foreign banks choose to buy a strong majority share only in those banks which have the highest profitability and cost efficiency.

In order to settle this question, we should investigate, through some causality tests, whether the lagged values of ROA and OVERTA determine present values of FOR or vice versa. However, due to data availability we are not able to use standard causality tests. We thus follow an indirect approach in order to gain some insight on the relationship between bank performance and foreign partnership. In particular, assuming that FOR affects our performance measures with some lags, another set of dummies has been included in all previous equations. FOR94 assigns a value of 1 whenever a foreign partnership was acquired before 1994, 0 otherwise; FOR95 concerns instead all those foreign partnerships acquired in 1995 and FOR96 those acquired in 1996.

[14] Claessens et al. (1999) find that foreign banks have higher profitability than domestic banks in developing countries, but lower profitability in developed countries.

[15] The 70 percent threshold has to be explained, since even a 51 percent share would allow complete control of the bank. However, we should note that only a limited number of foreign investments (3 percent of the total) implies the acquisition of a share included in the 50 percent - 70 percent interval. Probably, due to high expectations about TE banking sectors' profitability, foreign banks tend to prefer the acquisition of considerable stakes, whenever a good deal is recognised.

The estimated model (Table 5) shows that a higher profitability is associated with foreign partnerships established before 1994, whereas foreign partnerships established after 1994 are not statistically significant in explaining bank profitability. This finding corroborates our first interpretation, namely that foreign participation in a domestic bank does positively affect its profitability, and that the restructuring process takes some time. As far as operating efficiency is concerned, the additional explicative variables refer to a foreign shareholding higher than 70 percent which were in place before 1994 (FOR94), and 1996 (FOR96)[16]. The inclusion of these two new variables provide some mixed results. On the one hand, the coefficient for FOR94 is negative and significant at the 5 percent level, corroborating our previous assumption that foreign participation has succeeded in the restructuring process of the BFPs, but, on the other hand, the coefficient for FOR96 is positive and significant at the 10 percent level. These results convey mixed messages about the relationship between foreign partnership and cost efficiency, and might suggest either that improvements in operating efficiency require a majority foreign participation and a very long time, or that the output mix of BFPs has changed so much that the cost structure has been strongly affected by the new and higher value added activities, or both.

[16] No investment implying a foreign share of 70 percent has been registered in 1995.

Table 5: Determinants of bank performance in TEs

	ROA	ROA	ROA	ROA	ROA	OVERTA	OVERTA	OVERTA	OVERTA	OVERTA
Constant	*-3.20*	*-3.18***	*-3.19***	*-2.30*	*-1.25*	*0.058***	*0.058***	*0.066***	*0.07***	*0.006***
ETA	*0.03*	*0.03*	*0.03*	*0.04**	*0.04*	*-0.0002*	*-0.0002*	*-0.0002*	*-0.0002*	*-0.0002*
NLTA	*0.02**	*0.03**	*0.03**	*0.01*	*0.01*	*0.0002**	*0.0002*	*0.0002*	*0.0002*	*0.0002*
OOINIR	*0.36*	*0.36*	*0.41*	*-0.29*	*-0.20*	*0.004*	*0.004*	*0.004*	*0.003*	*0.004*
SIZE	*0.39***	*0.38***	*0.37***	*0.48***	*0.32**	*-0.006***	*-0.006***	*-0.007***	*-0.007***	*-0.006***
FOR3	*0.90***					*-0.003*				
FOR5		*0.93***					*-0.0004*			
FOR7			*0.85**					*-0.008**		
FOR94				*0.93**					*-0.01***	
FOR95					*-0.64*					
FOR96										*0.02**
R2 (Adj)	*0.60*	*0.60*	*0.60*	*0.48*	*0.46*	*0.43*	*0.43*	*0.45*	*0.48*	*0.45*

*FOR3, FOR5 and FOR7 point out a foreign partnership of at least 30 percent, 50 percent and 70 percent, respectively. FOR94 and FOR95 point out a foreign partnership existing in 1994 and 1995. In the OVERTA equation FOR94, and FOR96 point out investment initiatives involving a foreign ownership higher than 70 percent, that were in place before 1994, or in 1996. No investment initiative has been register in 1995, involving a 70 percent foreign shareholding. Country dummies are included, but not presented. ** and * indicate significance levels of 5 and 10 percent, respectively.*

V. Determinants of FDI localization in the banking sector

The identification of potential advantages of FDI for the host banking sector suggests that one should investigate the determinants of FDI in order to understand which sector and country features are relevant to the location decisions of foreign investors. Theoretical and empirical insights for this issue can be mainly obtained from studies on the determinants of capital flows towards developing and transition countries[17]. Extant studies have usually stressed the driving role either of external factors related to the conditions in world financial markets (push view), or internal factors related to the environment of the recipient country (pull view). An interesting attempt to extend this literature is provided by Miller and Parke (1998), where the sources of comparative advantages that accrue to banks operating abroad are discussed.

Consistent with the pull view, and partially following Miller and Parke (1998), our study analyzes FDI in TE banking sectors, focusing on internal factors. We adopt this approach for a number of reasons. First, external factors are mainly relevant to portfolio flows. Second, the short length of our period justifies the assumption that external factors are given. Third, pull factors are obviously much more informative and important for the economic and sectorial policies of the host country. Applying the pull approach to the FDI into the banking sector, the decision to invest abroad can be related to one or more of the following factors:

- *Market opportunities in the host country.* In testing the "market opportunity hypothesis", we expect FDI to be positively related to our three proxies for local market opportunities, namely, population (*POP)*, per-capita GDP (*GDPP)*, and the GDP share of services (*SG)* of the host country[18].

[17] See Fernandez-Arias and Montiel (1996) for a discussion of this literature; for recent studies on capital flows to Central and East European countries see, among others, Lansbury et al. (1996), Lankes and Stern (1998), and Manzocchi (1998).

[18] *GDPPF* is the per-capita GDP of the investor country and is a proxy for foreign market size.

- *Economic and political stability of the host country. INFL,* and *SH* are the two variables measuring economic and political stability used in our analysis. *INFL* is the inflation level of the host country, whereas *SH* is a stability indicator provided by "Institutional Investor" with values between 1 and 100[19]. We expect economic and political stability of the host country to be positively related to FDI.

- *Economic and cultural relations between the host and the foreign country.* In testing the relevance of economic and cultural relations we use *COMMG* and *DIST*, where *COMMG* is defined as the ratio between imports and exports and the host country GDP, and *DIST*, is the geographical distance between the capital of the host and the foreign country.[20] We also use the variable *SFDIG* as a proxy for the relationship between a bank and its clients. Foreign banks can decide to follow, or even anticipate, their clients into new markets, in order to maintain and strengthen their customer relationships (follow-the-client hypothesis). *SFDIG* is equal to the stock of FDI in the real sector of the host country, divided by the host country's GDP.

- *Features of the local banking sector.* We expect FDI to be positively related to the stability, efficiency, and potential profitability of the host banking sector. *ETA, SP*, and *CM2* are our variables used in testing the relevance of the features of the local banking sector. *ETA* measures the average level of bank capitalization as a proxy for bank stability; *SP* is the average spread on bank interest rates, and constitutes a proxy for profit opportunities; *CM2* is the ratio between currency and M2 and measures the degree of development of the host banking sector.

[19] Since *SH* is highly correlated with per-capita GDP, it has been used in model 2 in alternative to the per-capita GDP (see Table 6).

[20] It is also possible to foresee a positive relationship between FDI in the banking sector and geographical distance. As the distance from the host to the foreign country increases, in fact, foreign banks may need a physical presence in the host market in order to provide adequate services to their clients.

- *Host country's attitude to foreign banks.* We expect that a positive attitude towards foreign banks (low taxes, no discrimination, free entry, etc.) should be attractive for FDI. As a proxy for the host country's attitude to foreign institutions we use *TAXB,* which is the tax rate for banks in the host country, and *FBA,* a categorical variable to account for the Government's attitude towards foreign banks[21] [22].

Our model is estimated on panel data, with a longitudinal size equal to the pairs of foreign-host countries (61) for which at least one FDI initiative in the banking sector has been registered, and with a time span of 4 years (from 1992 to 1996). The panel is balanced. The period analyzed has particular relevance both to the transition context, and to the world banking sector environment. Compared to the early years of transition, this period is characterized by substantial progress in the reforming process, and by the adoption of a complete and coordinated set of policies. During the same period, the world banking system was affected by the EU integration process, by growing deregulation, and thus by a more competitive environment. The model is a linear one-way error component model with random effects[23] and can be formally represented as follows:

$$y_{it} = \alpha + x'_{it}\,\beta + m_i + v_{it}$$
$$m_i + v_{it} = u_{it}$$

where *y* denotes the number of investment initiatives from a foreign to a host country until year t, for t equal 1993-1996. By considering the number of initiatives, rather than their value, this specification of the dependent variable is not biased towards large banks, and it thus

[21] A value of 1 is assigned if the Government provides substantial protection for domestic banks, by restricting the entry of foreign banks, imposing high controls, and forbidding foreign bank participation in the privatization process. A value of 2 is assigned when the Government's attitude towards foreign banks is positive but some sort of discrimination between foreign and local banks still exists. A value of 3 is awarded if foreign banks are not discriminated against at all.

[22] Because of the high correlation between *FBA* and *SH,* the former has been dropped when the latter was included in the explanatory vector.

[23] The Breusch and Pagan test (BP) and the Hausman test confirm the presence of a random effect for each pair of countries, the validity of the main assumptions, and the correct specification of the model.

allows us to explain the behavior of both small and large institutions. Unfortunately, by using a discrete variable the size of the coefficient is not informative, however the econometric estimation of the model allows us to draw some conclusions concerning the relevance of different variables in determining investment localization decisions. m_i is the specific unobservable effect for each pair of countries, which is random, and v_{it} denotes the remaining disturbances. $\boldsymbol{x}$ is the vector of explanatory variables we have discussed above.

Table 6 presents the GLS estimation results for two slightly different specifications (MODEL1 and MODEL2[24]). The econometric analysis corroborates the relevance of the previously mentioned factors. Almost all the variables used as proxies for market opportunities, political and economic stability, links with the real sector, features of the host banking sector, and host country's attitude towards foreign institutions are statistically significant, and conform with our a priori. Regarding market opportunities, we found that foreign banks locate their investments where population, per-capita GDP, and service sector share of GDP are high. Moreover, own country market size tends to positively affect foreign bank investment activities. Indicators of economic and political stability also have positive and significant coefficients. Our estimates confirm the presence of a positive relationship between the situation of the real sector and FDI in the banking sector.[25] Close links between FDI in the real sector and trade on the one hand, and FDI in the banking sector on the other, are detected. These relationships suggest the existence of "follow the client" strategies; foreign banks enter TEs following international firms, which provide them with an initial customer base [26]. Conversely, the relationship between distance and bank investments is non significant, showing that geographical proximity is not a direct determinant of FDI in the

[24] MODEL1 includes all the above specified variables, except for the economic and political stability indicator SH. MODEL2 introduces the SH variable, while GDPP and FBA are excluded, due to the correlation with SH.
[25] Goldberg and Johnson (1990) and Hondroyannis and Papapetru (1996) gained similar results when analyzing foreign banks international activities in developed countries.

banking sector. However, distance may possibly influence FDI indirectly by affecting trade and investment in the real sector. Local banking sector features also play an important role in affecting foreign bank investment decisions. Foreign banks prefer those countries where the banking sector is relatively more developed and stable, and where there are large interest rate margins to exploit[27] [28]. Mixed results are instead associated with our proxies for the host country's attitude towards foreign banks. The variable FBA is highly significant, but taxation does not seem to be an important determinant of bank FDI.

Finally, we also estimated two additional equations in order to investigate whether different levels of foreign participation in the host bank are driven by different factors. In particular, we used two dependent variables distinguishing between FDI which imply a foreign control (shareholding larger than 50 percent) and those which involve minority involvement.

Table 7 presents our results.[29] The main finding is that foreign bank location strategies do depend on the share of foreign participation in the host institution. Under the assumption that foreign banks first undertake smaller investments, and then, when they have better knowledge of the TEs context, become involved in majority stake investments, our results could suggest a particular sequential approach to FDI in the banking sector. In the first stage, foreign banks base their decisions about investing abroad on a wide range of variables, among

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[26] Miller and Parkhe (1998) found that the follow-the-client hypothesis holds for industrialized countries, but has only partial support in developing countries. However, no transition economy was included in their sample.

[27] The spread variable could be considered as a proxy for market concentration and thus competition. In order to detect this possibility, we introduced in the model a concentration index (N(5)), which was however not significant.

[28] Our evidence here is consistent with Yamori (1998) where Japanese banks choose their locations based on the local opportunities in the host countries. Different results for US banks have been found in Nigh et al. (1986); according to their findings, local market opportunities have no significant effect for US banks' expansion in developing countries. The results of Nigh et al. (1986) are also contrary to those obtained by Goldberg and Johnson (1990) where per capita GDP of foreign countries is an important factor for the location choice of US banks. However, no transition economy was included in these studies.

[29] Only new estimates of our previous MODEL2 are presented in Table 7. MODEL1 has also been estimated, producing similar results.

Table 6: Determinants of FDI localization in the banking sector in TEs

Y	MODEL 1	MODEL 2
POP	*0.100***	*0.092***
GDPP	*0.0003***	
SH		*0.059***
INFL	*-0.003***	*-0.003**
SG	*0.06***	*0.054***
SFDIG	*10.121***	*9.677***
COMMG	*7.597***	*8.258***
GDPPF	*0.00005***	
CM2	*-5.19***	*-3.777***
SP	*0.037***	*0.032***
ETA	*0.034**	*0.035**
TAXB	*-0.012*	*-0.003*
FBA	*0.648***	
DIST	*-0.00007*	*-0.00008*
Constant	*-5.214***	*-5.166***
	R-sq within=0.4 between=0.3 overall=0.3	R-sq within=0.4 between=0.3 overall=0.3
	chi2(13)=186 Prob>chi2=0.00	chi2(12)=193 Prob>chi2=0.000
Hausman test	chi2(11)=16.29 Prob>chi2=0.13	chi2(11)=10.67 Prob>chi2=0.47
BP test	chi2(1)=212 Prob>chi2=0.000	chi2(1)=216 Prob>chi2=0.000

*** and * indicate significance levels of 5 and 10 percent, respectively.*

Table 7: Determinants of FDI by degree of foreign shareholdings

	Majority	Minority
POP	*0.06***	*0.05***
SH	*0.03**	*0.04***
INFL	*-0.02**	*-0.001*
SG	*0.02*	*0.04**
SFDIG	*5.13***	*7.9***
COMMG	*4.01*	*4.9***
GDPPF	*0.00002*	*0.00004**
CM2	*-2.73**	*-2.98***
SP	*-0.009*	*0.025***
ETA	*0.024*	*0.034**
TAXB	*-0.009*	*0.002*
DIST	*0.00006*	*-0.0001***
Constant	*-1.83*	*-3.35***
	R-sq within=0.5 between=0.3 overall=0.3 chi2(12)=125 Prob>chi2=0.000	R-sq within=0.5 between=0.3 overall=0.3 chi2(12)=134.5 Prob>chi2=0.000
Hausman test	chi2(11)=9.48 Prob>chi2=0.58	chi2(11)=13.25 Prob>chi2=0.28
BP test	chi2(1)=128 Prob>chi2=0.000	chi2(1)=157.6 Prob>chi2=0.000

*Majority: Number of FDI initiatives in the banking sector from a foreign country to an host country before year t, with a majority foreign shareholding; Minority: Number of FDI initiatives in the banking sector from a foreign country to an host country before year t, with a minority foreign shareholding. ** and * indicate significance levels of 5 and 10 percent, respectively..*

which proxies for market opportunities, economic stability, trade relations, features of the host banking sector, and even geographical distance play an important role. In the second stage, the relevant variables for deciding further investments reduce in number drastically. Of

these variables, proxies for economic and political stability and bank-customer relationship are the determinants of the second stage investment decision.

VI. Conclusions

This paper has sought both to analyze the effects of FDI on TE banking sectors, and to explain the pattern and determinants of FDI in banks of TEs. It has discussed why FDI in TE banking sectors may be considered a special case in the FDI literature, and why the overall welfare implications of foreign entry into TE banking sectors should be positive. Unfortunately, an obstacle against analysis of FDI in the banking sector, and more generally in the service sector, is lacking or poor statistical information. Our paper has presented new statistics on FDI in the banking sectors of 9 CEECs. Combining this new information with the financial statements of each bank, the paper has investigated the impact of foreign entry on the host banking sector and the determinants of FDI location. In contrast with the very few studies that have dealt with these issues, ours has considered all FDI, including minority investments in TE banking sectors. By means of a sensitivity analysis, our paper has discriminated the effects of different level of foreign participation. The empirical results support and extend the findings of earlier studies. The paper has shown how BFPs operate differently from domestic banks, and it has also provided some evidence on the positive role of FDI in the performance of the host banking sector. BFPs show a higher profitability than local banks, partially due higher loan quality. Moreover, BFPs seem to obtain positive results in terms of cost efficiency only when foreign participation exceeds 70 percent of the host bank capital.

As far as the determinants of FDI are concerned, we found that a wide variety of factors are required to explain the location of FDI in TE banking sectors. Our evidence

indicates that political and economic stability, existing trade links, features of the host banking sector, and host country's attitude towards foreign institutions play an important role in directing FDI towards countries in transition. There was no evidence that fiscal considerations are important in determining FDI in the banking sector. These findings have interesting implications. For instance, our results indicate that FDI in TE banking sectors has an important endogenous component, which implies that sound macroeconomic and sectorial policies are crucial for FDI. By confirming the importance of the banking environment, our results suggest that continuing efforts to improve the banking environment should continue to be a top priority, if TEs are to retain top-quality multinational banks and attract additional investment in their banking sectors. Links between trade and FDI are also interesting for the future pattern of FDI, given that Central and East European trade is increasingly reorienting itself towards the EU area. We have also studied the determinants of FDI, distinguishing among different levels of foreign partnership, and we have found significant differences between the factors determining minority investments and those related to majority investments. This difference suggests that FDI analysis should be conducted at a lower level of disaggregation. Another related and interesting question, which deserves further attention, is how foreign banks choose among the alternative modes of entry into new markets abroad.

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