FOREIGN DIRECT INVESTMENT IN THE BANKING SECTOR: A TRANSITIONAL ECONOMY PERSPECTIVE

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FOREIGN DIRECT INVESTMENT IN THE BANKING SECTOR: A TRANSITIONAL ECONOMY PERSPECTIVE[1]

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Abstract

In this paper we use new statistics on 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. However, we find that substantial foreign ownership is necessary if there is to be a positive effect on bank profitability and cost efficiency. We also analyze the determinants of FDI location choices in TEs. Our evidence indicates that political and economic stability, existing trade linkages, features of the host banking sector, and the host country's attitude towards foreign institutions are relevant factors in catalyzing FDI in the banking sectors of TEs. We also provide evidence for FDI determinants, distinguishing among different levels of foreign partnership.

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Indice

1. 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 mainly concentrated on investigating investments in natural resources and manufacturing sectors, paying 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

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[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

FDI in the banking sector 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 – also using new statistics on FDI in TEs[2] – the issue of foreign ownership in the banking sector, 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. Secondly 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.

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to FDI in financial sectors. Comparative analysis of foreign and domestic banks are provided in Claessens et al. (1997) and Sabi (1995).

[2] The analyzed TEs are nine central and east European countries: Hungary, the Czech Republic, Poland, Estonia, Latvia, Lithuania, the Slovak Republic, Slovenia and Romania.

2. FDI in the banking sector: Why transitional economies are 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, Kietzer and Roldy 1996)

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, which

requires a certain level and type of financial services, and a new and laggardly financial sector which has been able to fill this gap only partially. This gap, much larger than in developing countries, has enabled foreign ownership to move into the banking sector. At the same time, since the demand for financial services is generally very elastic to changes in income, and given the positive prospects for TEs, further opportunities have been created for FDI in those host countries with higher economic growth.

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. The benefits traditionally associated with foreign entry are manifold. Foreign bank entry should improve the production function of financial services through the application of more effective technology and higher banking skills. The work ethic and managerial skills associated with foreign participation should contribute to producing a new and more efficient legal environment within the host banking sector. The transfer of knowledge and technology gives domestic institutions new dimensions and opportunities in many areas of banking. In its turn, this should improve the quality and availability of financial services, reduce their cost, introduce innovations and increase competition. Finally, foreign banks should also enhance a country's access to international capital markets, increasing the availability of financial instruments, allowing better hedging facilities, and reducing the cost of credit.

Some characteristics of TEs enhance these benefits even further during the transition process. 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.

But the contribution of FDI in the banking sector of TEs goes beyond the benefits mentioned. 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. A variety of arguments for restraining foreign participation in the banking sector have been put forward in the literature.[3] Most of them, however, 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". The domestic banks of TEs do not have sufficient experience, know-how, and technology with which to withstand foreign competition after the initial stage of a market-oriented economy. Hence, there is a fear of domination by foreign banks, especially when the strategy of the latter heads to retail banking. If this is the case, then in the short and medium term domestic banks must reorganize and rethink their activities, or else their profitability may be impaired.[4] 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. Consequently, the risk of domination, if any, may occur only in the long run when

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[3] For a recent review of the arguments against foreign bank entry see Bonin et al. (1998).

[4] The potential existence of these temporary costs for domestic institutions has been shown by the many occasions on which leading domestic banks have actively opposed entry by their foreign counterparts in the market or their engagement in the full range of banking activities.

domestic banks have had enough time to adjust to the higher level of competition. The infant industry issue could be of further relevance in TEs, not only because foreign banks have a comparative advantage in terms of more sophisticated financial services and lower operating costs, but also because foreign banks do not have to cope with the typical problems of TEs represented by the vast array of inherited operational inefficiencies and losses due to previous non-performing assets. This, however, is an issue which concerns not the decision on foreign entry *tout court* but the choice of the right sequence. In fact, it is advisable that the opening up to foreign banks should not run ahead of a complete restructuring of domestic banks.

A second argument is that the government 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. In any case, domestic regulators and supervisors should be in place before foreign entry is allowed, in order to prevent fraud and to ensure the stability of the banking sector.

A third issue is capital outflows. The risk here is that foreign banks may compete for local deposits and channel the funds outside the country, thanks to their closer ties to the international financial community. A connected concern is that foreign banks may be more prone to enter and exit the domestic market under special circumstances, and thus be less committed to domestic interests. Again, this concern tends to be over-emphasized in the literature. On the whole, foreign banks tend to be net importers of capital, and convincing evidence of the existence of more volatile foreign banks' behavior has yet to be provided.

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 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 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. (1997) 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.

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

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, and then to a lesser extent the Czech Republic. Poland instead started to receive external flows later, becoming the leading destination in 1994 and 1996. At the end of 1996, Hungary and Poland were the main recipients of FDI among TEs with an inward stock of USD 15.1 and 13.7 billion, equal to 31.5 percent and 7.2 percent of GDP, respectively.

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. (1997) 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 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 comparison between the asset share and the number of foreign banks in TEs with respect to other countries.

However, Claessens et al. (1997), 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. (1997), 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 data set instead considers all FDI initiatives by a foreign bank in nine Central and East European Countries during the

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[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. (1997) 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.

period 1989-1997, including investments in minority stakes, and it integrates financial statement information for each bank[8] 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 data have been collected from specialized newspapers, and they have been double-checked with central banks. The total number of observations is 250;[9] by recording each investment initiative, our data set does not discriminate between large and small banks.

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. Comparison of different transition and development indicators[10] shows that Hungary and Estonia are the two TEs which have progressed

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[8] The financial statement information has been retrieved from the BankScope data base provided by IBCA.

[9] 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.

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

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). Slovenia, Slovakia and Romania have not yet begun privatization of their large banks. In Slovenia and Lithuania, discrimination practices against foreign banks still persist, and substantial protection is granted to local banks. By contrast, there seems to be no discrimination in Hungary, Estonia, Poland, and the Czech Republic.

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).

4. Impact of FDI in the banking sector

In order to investigate the role of foreign participation in the host banking sector our analysis considers all investments in indigenous banks, including those with minority stakes in the host bank capital. A first descriptive analysis compares some balance-sheet indicators, distinguishing among banks with different levels of foreign partnership (Table 4). For each country, only banks with complete information throughout the 1993-1997 period are considered (so that our sample amounts to 112 banks in the nine TEs). The foreign partnership has been specified in order to discriminate within a wide range of foreign participation, although just four thresholds are

presented in the text, namely 10 percent (FOR1), 30 percent (FOR3), 50 percent (FOR5), and more than 60 percent (FOR6).

The data reported in Table 4 reveal some clear differences between domestic and foreign-participated banks (FPBs).[11] For instance, FPBs 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 FPBs with respect to domestic banks. This attitude may reflect various penetration strategies of FPBs, which have limited their involvement by focusing on selected clients and on wholesale rather than on retail transactions. Moreover, FPBs banks tend to specialize in those market niches that require competencies that local banks do not usually have, such as services and consulting activities. FPBs also display a more rapid growth of their loan portfolios, and when foreign participation exceeds 30 percent, foreign-participated banks appear to be more capitalized as well as more profitable. However, a positive effect of the foreign partnership on the cost structure of the participated bank is detected only when the foreign partner has a considerable stake in the indigenous bank (more than 60 percent).

To analyze further the relationship between foreign partnership and bank performance we estimated a simple regression equation in order to investigate whether bank profitability can be explained by the presence of foreign participation. Moreover, we carried out a sensitivity analysis in order to find out what share of participation, if any, is required to affect bank performance positively.

The equation was estimated as a cross section. Using average bank balance sheet data for the 1993-1997 period, bank profitability, measured by the return on assets (ROA), was explicated by the following model:

$$ROA = a + \Sigma b_i\ FSV_i + cSIZE + dFOR + CD + \varepsilon$$

where $SIZE$ is the logarithm of total assets of domestic banks, FOR is our measure of foreign participation, CD are country dummies, and FSV is a set of bank financial indicators. In particular, as financial indicators we included the following: net interest revenues over total assets (NIRA), other operating income over total assets (OOIA), overhead expenses over total assets (OVERTA), net loans over total assets growth rate (DNLTA), and equity over total assets (ETA). Country dummies were introduced to take account of different legal, regulatory, and macroeconomic features which could influence profitability. Different dummy variables were also included in order to analyze the impact of different levels of foreign ownership.[12]

The estimation results (Table 5) show that only foreign participation greater than 60 percent is positively linked to the profitability of banks in TEs, whereas coefficients for lower foreign participation do not have the same level of statistical significance. A first interpretation suggests that FPBs entering the TEs' banking sector have achieved mixed results. Foreign banks seem to succeed in the restructuring process of the FPBs only when they acquire a strong majority share. However, no causality is tested in the above estimated equation, and thus the result 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.

In order to settle this question, another set of foreign dummies was included in the equation. FOR6-93 assigns a value of 1 whenever a foreign partnership larger than 60 percent was acquired before 1993, 0 otherwise; FOR6-94 concerns instead all those foreign partnerships larger than 60 percent acquired in 1994. The estimated model (Table 5) shows that foreign partnerships of at least 60 percent established before 1993 positively affect the profitability of FPBs, while foreign partnership established in 1994 (FOR6-94) or in 1995[13] have no significant effect on bank profitability. This corroborates our first

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[11] The term FPB is used here to comprise both domestic banks with a minority foreign participation, and foreign banks (a stake no less than 50 percent of the bank capital).

[12] Dummies for all shareholdings between 10 percent and 100 percent were considered; however only FOR1, FOR3 FOR5 and FOR6 are presented.

[13] This model was not presented because the results are consistent with the previous one.

interpretation, namely that a large foreign participation in a domestic bank does positively affect the performance of the FPB.

5. 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 foreign investor location decisions.

The theoretical and empirical literature has not directly analyzed FDI in the banking sector. Theoretical and empirical insights for this issue can be obtained from studies on the determinants of capital flows towards developing and transition countries.[14] These 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). Consistent with the pull view, 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 positively related to one or more of the following factors:

market opportunities;

economic and political stability of the host country;

economic and cultural relations between the host and the foreign

country;

specific features of the local banking sector (in terms of stability, efficiency, and potential profitability);[15]

the host country's attitude to foreign banks[16] (including fiscal treatment of foreign entities).

Our model explores the relevance of the above mentioned factors. The model is estimated on panel data, with a longitudinal size equal to the pairs of foreign-host countries for which a FDI 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 co-ordinated 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[17] and can be formally represented as follows:

$$y_{it} = \alpha + x'_{it}\beta + \mu_i + v_{it}$$

$$\mu_i + v_{it} = u_{it}$$

where y denotes the number of investment initiativesrom 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 does not introduce a distortion in favor of large

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[14] 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).

[15] In particular, investments should be directed where the banking system is relatively stable, developed and where potential profits are high.

[16] A positive attitude towards foreign banks (low taxes, no discrimination, free entry) should be attractive for FDI.

[17] The Breusch and Pagan test 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.

banks, and it thus allows us to explain the behavior of both small and large institutions. μ_i is the specific unobservable effect for each pair of countries, which is random, and v_{it} denotes the remaining disturbances. x is a vector of explanatory variables mainly related to the situation of the host country, comprising the following variables.

POP, *GDPP*, and *SG* are the population, the per-capita GDP, and the GDP share of services of the host country, respectively. These variables are proxies for the importance of local market opportunities to attract FDI. *GDPPF* is the per-capita GDP of the investor country and is a proxy for foreign market size.

INFL, and *SH* are two variables measuring economic and political stability. *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. However, since this variable is highly correlated with per-capita GDP, it has been used in model 2 in alternative to the per-capita GDP (see Table 6).

COMMG is a proxy for the relevance of trade relations, and it is defined as the ratio between imports and exports and the host country GDP.

SFDIG is 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. *SFDIG* is equal to the stock of FDI in the real sector of the host country, divided by the host country's GDP.

DIST, is the geographical distance between the capital of the host and the foreign country, and it has been considered as a proxy for geographical and cultural proximity.[18]

ETA, *SP*, and *CM2* are variables related to the host 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 in the sector; and *CM2* is the ratio between currency and M2 and measures the degree of development of the host banking sector.

TAXB is the tax rate for banks in the host country.

FBA is a categorical variable to account for the Government's attitude towards foreign banks.[19] Because of the high correlation between *FBA* and *SH*, the former has been dropped when the latter was included in the explanatory vector.

Table 6 presents the GLS estimation results for two slightly different specifications (MODEL1 and MODEL2[20]). 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 and significant relationship between the situation of the real sector and FDI in the

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[18] It is however 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.

[19] 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.

[20] 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 existing correlation with SH.

banking sector.[21] 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 (Bonin et al. 1998). Conversely, the relationship between distance and bank investments is negative and non significant, showing that geographical proximity is not a direct determinant of FDI in the 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.

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 larger and smaller than 60 percent of the host bank capital (L60 and S60, respectively).

Table 7 presents our results.[22] 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

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[21] Goldberg and Johnson (1990) and Hondroyannis and Papapetru (1996) gained similar results when analyzing foreign banks international activities in developed countries.

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

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 which proxies for 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. Of these variables, proxies for bank-customer relationship, market opportunities, and economic stability are the main determinants of the second stage investment decision.

6. 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 FPBs 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. However, an interesting finding is that FPBs obtain positive results in profitability and cost efficiency only when foreign participation exceeds 60 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. A related and interesting question which deserves further attention is how foreign banks choose among the alternative modes of entry into new markets abroad.

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).

Table 2: FDI inflows in TEs

(Million of US Dollar)

	1993	1994	1995	1996
Czech Republic	654	878	2568	1200
Estonia	162	215	202	138
Hungary	2350	1144	4519	1982
Latvia	45	214	180	292
Lithuania	30	31	73	152
Poland	1715	1875	3659	5196
Romania	94	341	419	624
Slovak Republic	199	203	183	150
Slovenia	113	128	176	160

Source: UNCTAD (1998)

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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.

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Table 4: Foreign shareholding and balance sheet indicators

	FOR	n. banks	ROA	NIRA	OOIA	OVERTA	ETA	SIZE	NLTA	DNLTA
FOR1	0	35	1.4	7.2	3.4	0.04	15.1	5.9	36.8	0.14
	1	77	1.6	6.4	4.3	0.06	13.6	5.5	41.3	0.18
FOR3	0	62	1.6	7.4	4.0	0.05	13.8	5.7	40.0	0.11
	1	50	1.5	5.8	4.1	0.05	14.3	5.5	39.8	0.24
FOR5	0	69	1.6	7.3	4.0	0.05	13.6	5.7	41.0	0.11
	1	43	1.6	5.7	4.1	0.05	14.7	5.4	38.2	0.26
FOR6	0	75	1.5	7.2	3.9	0.053	13.4	5.7	40.5	0.10
	1	37	1.8	5.7	4.2	0.049	15.4	5.3	38.8	0.30

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; NLTA: Net Loans over Total Assets; DNLTA: Net Loans over Total Assets average growth rate; ETA: Equity over Total Assets; SIZE: logarithm of Total Assets; FOR(1, 3, 5, 6): foreign partnership dummy: this is 1 when a foreign partnership larger than 10, 30, 50 or 60 percent respectively is detected, 0 otherwise.

Table 5: Determinants of bank profitability in TEs

ROA	FOR1	FOR3	FOR5	FOR6	FOR6-93	FOR6-94
Constant	-4.937**	-4.958**	-5.038**	-5.186**	-5.987**	-4.524**
NIRA	0.463**	0.475**	0.475**	0.488**	0.501**	0.450**
OOIA	0.509**	0.518**	0.519**	0.515**	0.540**	0.558**
OVERTA	-22.380**	-21.334**	-21.519**	-20.572**	-19.290**	-21.544**
DNLTA	-1.261**	-1.262**	-1.268**	-1.274**	-1.200**	-1.223**
ETA	0.065**	0.061**	0.061**	0.057**	0.055**	0.062**
SIZE	0.354*	0.364*	0.383*	0.390**	0.474**	0.316*
FOR	0.730	0.566	0.644	0.913**	1.393**	-0.456
p1	-0.774	-0.620	-0.603	-0.604	-0.704	-0.310
p2	-0.325	-0.074	-0.021	-0.051	-0.043	-0.177
p3	-2.259**	-2.177**	-2.202**	-2.292**	-2.151**	-2.201**
p4	-3.224**	-3.106**	-3.034**	-3.094**	-3.090**	-3.240**
p5	-0.023	0.069	-0.011	-0.092	0.017	0.384
p6	0.179	0.250	0.211	0.262	0.389	0.468
p7	-0.696	-0.625	-0.605	-0.666	-0.566	-0.510
p8	-0.176	-0.034	-0.091	0.005	0.080	0.016

*P1-P8: Country dummies; FOR: foreign partnership dummy; in particular FOR1-FOR6 account for a foreign partnership of at least 10%-60%, FOR63 is for a foreign partnership of at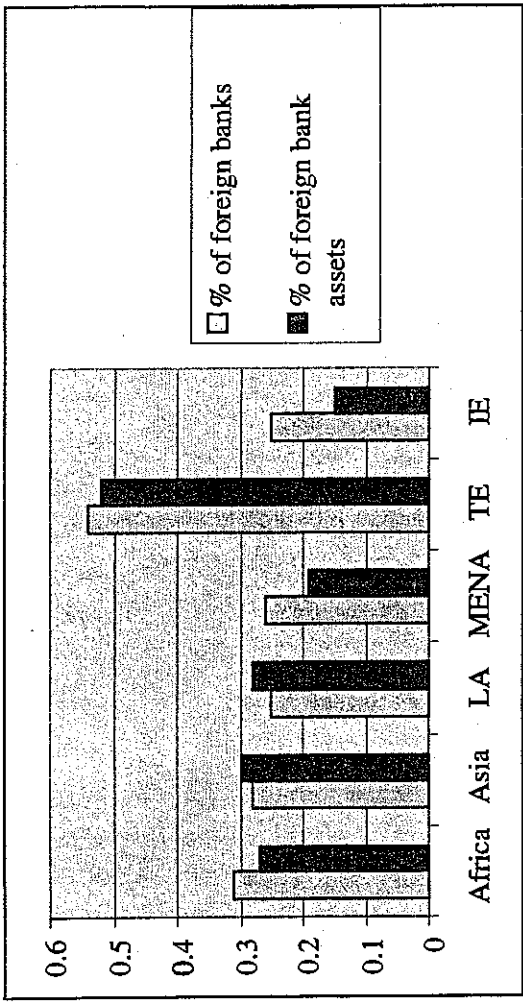 least 60% existing in 1993, FOR64 is for a foreign partnership of at least 60% done in 1994. (** coefficient significant at the 5% level, * coefficient significant at the 10% level).*

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**	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
BeP test	chi2(1)=212 Prob>chi2=0.000	chi2(1)=216 Prob>chi2=0.000

(** means that the coefficient is significant at the 5% level, * means that the coefficient is significant at the 10% level).

Table 7: Determinants of FDI location in the banking sector in TEs according to different foreign shareholdings

	L60	S60
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
BeP test	chi2(1)=128 Prob>chi2=0.000	chi2(1)=157.6 Prob>chi2=0.000

L60: Number of FDI initiatives in the banking sector from a foreign country to an host country before year t, with a foreign shareholding larger than 60%; S60: Number of FDI initiatives in the banking sector from a foreign country to an host country before year t, with a foreign shareholding smaller than 60%. (**coefficient significant at the 5% level, * coefficient significant at the 10% level).

Chart 1: Foreign banks penetration by world regions

Legend:
- □ % of foreign banks
- ▨ % of foreign bank assets

Categories (left to right): Africa, Asia, LA, MENA, TE, IE

Y-axis: 0, 0.1, 0.2, 0.3, 0.4, 0.5, 0.6

LA: Latin America; MENA: Middle East and North Africa, TE: Transition Economies, IE: Industrialized Economies

Source: Classens et al. (1997)

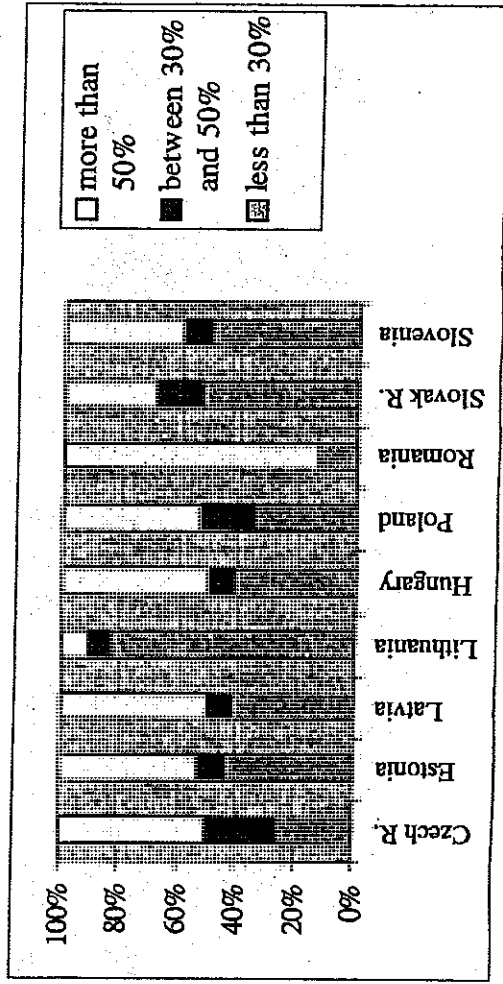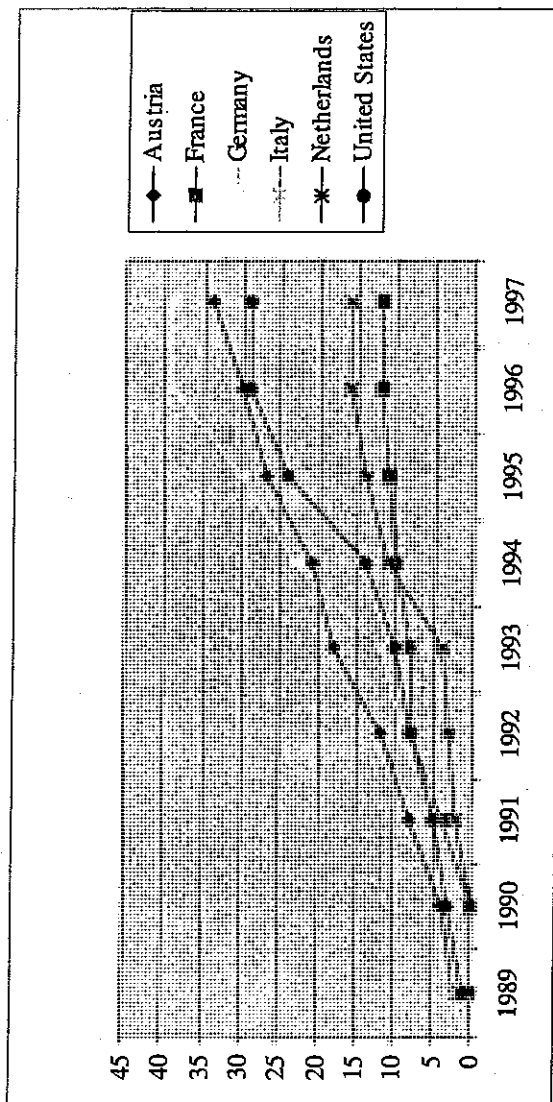## Chart 2: FDI in the banking sector - shareholding class by host country

Legend:
- □ more than 50%
- ■ between 30% and 50%
- ▨ less than 30%

Countries (top to bottom): Slovenia, Slovak R., Romania, Poland, Hungary, Lithuania, Latvia, Estonia, Czech R.

X-axis: 0%, 20%, 40%, 60%, 80%, 100%

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

Legend: Austria, France, Germany, Italy, Netherlands, United States

(Chart axis values: 45, 40, 35, 30, 25, 20, 15, 10, 5, 0; years: 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997)

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