

THE IMPACT OF FOREIGN  
BANK ENTRANCE ON THE  
DOMESTIC BANK  
PERFORMANCE IN THE  
COUNTRIES WITH  
TRANSITION ECONOMY:  
CASE OF RUSSIA AND  
UKRAINE

by

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Abstract

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Using individual bank data for Russia and Ukraine in the 1998-2003 period, this paper evaluates the influence of foreign bank entry on the performance of domestic banks in these countries. The considered indicators of performance are net interest margin to total assets, non interest income to total assets, personnel expenses to total assets, and before tax profits to total assets. It is found that foreign bank entrance has positive (negative) and significant impact on net interest margins of domestic banks in Ukraine (Russia). Also, foreign bank entry does not stimulate development of new banking products and technologies in domestic banks. Personnel expenses are unaffected by foreign entry in Ukraine but they are negatively and significantly influenced by foreign entry in Russia. Estimation results further suggest that number of foreign players rather than their size influences the performance of domestic banks.

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## GLOSSARY

**CBR** The Central bank of Russia

**NBU** The National Bank of Ukraine

**p.p.** Percentage point

## *Chapter 1*

### INTRODUCTION

The liberalization of financial markets worldwide is a distinctive feature of the last decade. Not only developed but also developing countries ever more allow foreign bank penetration. The opening-up of financial sector proceeds on the premise that gains from foreign entry to domestic markets offset any possible losses to domestic banks. It is widely believed that foreign bank presence may have a positive effect on the efficiency of banking sectors in developing countries, improving the quality, pricing, and availability of banking services.

Since August 1991 Ukrainian and Russian financial markets have been opened up and liberalized. Reforms were implemented as part of a structural adjustment program to switch to an outward-oriented growth strategy. They had two key elements: the first was the elimination of controls on interest rates, and a significant reduction in directed credit programs; the second was the relaxation of entry barriers into the banking system to promote competition and increase efficiency.

The Ukrainian banking system consists of the central bank - the National Bank of Ukraine (NBU), and commercial banks of various classifications. As of December 1, 2003 there were 179 banks registered in Ukraine, including 20 banks

with foreign capital (7 banks with 100% foreign capital). Actually, 157 banks are operating with total statutory capital of \$1.4 bln.<sup>1</sup>

Today, only Ukreximbank and Oshchadbank remain state banks, the others having been privatized.

The Top-10 commercial banks are: Aval, Privatbank, Prominvestbank, Oschadbank, Ukrsootsbank, Ukreximbank, Ukrsibbank, Raiffeisen, Nadra, and Brokbiznesbank (as of 01/01/04). These banks hold more than 50% of the assets in the banking system of Ukraine and collect about 60% of the deposits.

The first bank with foreign capital, First Ukrainian International Bank, was opened in 1991. Since that year the banking sector of Ukraine became open to foreign capital. But at the initial stages of development of the newly independent state, the activity of foreign capital was restricted.

In 1997, after macroeconomic stability was reached and national currency was introduced, the Ukrainian government eased restrictions on foreign banks and now it has one of the most liberal policies towards foreign banks in the region. As a consequence, several banks entered Ukraine in 1998, including Creditanstalt Austria, ING, Raiffeisen, and Citibank. Raiffeisen is now listed as the country's 7th-largest bank.

There are few entry barriers in the banking sector. Foreign-owned banks are required to open a resident office one year before applying for a banking

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<sup>1</sup> The National Bank of Ukraine statistics, [www.bank.gov.ua](http://www.bank.gov.ua)

license. The minimum authorized statutory fund is EURO 10 million, a small sum by international standards. In April 1998, the NBU abolished the 15% limit on foreign investment in domestic banking sector, further blurring the line between local and foreign investment.

Most foreign banks operations serve multinational subsidiaries and joint ventures by extending short and medium-term credit and assisting in export transactions. Raiffeisen is the only foreign bank in Ukraine, which works in retail banking.

The Russian banking system consists of 1612 banks (as of 1 January 2004). 1207 banks are actually operating with total statutory capital of \$12.7 bln. and total assets of \$191 bln.<sup>2</sup> Top 10 banks hold more than 50% of the assets of all Russian banks.

By the number of foreign banks Russia takes the fourth place in the Central and Eastern Europe after Hungary, Poland, and Czech Republic. As of 1 January 2004, 32 banks with 100% foreign capital and 9 banks with more than 50% foreign capital operate in Russia.

The first foreign bank in Russia, Credit Lyonnais, was established in the end of 1991. In 1993 there were already 12 subsidiaries of foreign banks. Until 1996 the number of foreign banks increased by 10.

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<sup>2</sup> The Central Bank of Russian Federation statistics, [www.cbr.ru](http://www.cbr.ru)



In the beginning of 2002 the number of banks with 100% foreign capital reached 23 and overall foreign investment in the capital of Russian banking sector conducted 7% of total capital.

During the years of transition, the attitude of the Central Bank of Russia to the foreign banks entrance was varied. In 1993-1996 foreign banks were allowed to work only with foreign residents (with certain exclusions) in the territory of Russia. Since 1997 the treatment of foreign banks in the country is quite liberal.

A well-known limitation is 12% limit on the foreign participation in the statutory capital of the Russian banking system. But the government is considering the abolishment of the limitation in the near future.

In 2002 the requirements to statutory capital of foreign banks were equalized with those for domestic banks and decreased from EURO10 mln to EURO 5 mln. Qualitative requirements to the shareholders and management of banks are not an essential problem.

On the whole, the current limitations on the foreign banks activity do not principally differ from those in Europe and North America. The problem is not in excessive requirements to foreign banks but in lessened requirements to domestic banks, which do not correspond to the international practice.

As of 01/01/04 7 banks with 100% foreign capital operated in Ukraine. The banks concise 4.5% of the total bank number and their assets concise 5% of

the total bank assets<sup>3</sup>. In Russia 30 100% foreign banks operate and their number and assets share is 3% and 8% respectively<sup>4</sup>. Taking into account the figures for Eastern European transitional countries, which are 54% and 52% respectively, and for developed countries – 25% and 15% respectively [Claessens et al, 2001], the numbers for Ukraine and Russia evidence about quite low foreign bank presence in the countries.

In this paper I intend to present and evaluate the experience of Russia and Ukraine with foreign bank entry and, based on the experience and current market structure, draw recommendations for further liberalization of the banking sector of the countries.

The paper is organized as follows. The chapter 2 sketches the previously made research on the discussed issue. The model specification and the data are described in the third chapter. The chapter 4 analyses the results, while final chapter concludes and presents policy implications.

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<sup>3</sup> The source: Visnyk NBU [The Bulletin of the National bank of Ukraine], #2 2004

<sup>4</sup> The source: Official Internet cite of the Central bank of Russia, [www.cbr.ru](http://www.cbr.ru)

## *Chapter 2*

### LITERATURE REVIEW

There are different arguments in the literature why foreign bank presence can influence performance of domestic banks. First, increased competition due to entrance of foreign bank may stimulate the decrease of costs in the domestic banking system, rise of range and quality of banking services, and introduction of more efficient banking techniques. At the same time, increased competition may lead to drop in profits in the banking sector through decrease of prices for banking products and services and decrease of market share of existing banks.

Second, foreign bank entrance may contribute in the quality of human capital of local employees and management in the banking sector. Local employees and managers may learn from high skilled foreign managers imported to the country. Furthermore, foreign banks may invest in training of local employees.

Third, foreign banks may promote improvements of bank regulation and supervision from regulatory authorities, and reduction of governmental influence on the financial sector. The solid reputation and power of many foreign banks give them high possibilities for effective lobby of their interests.

Most of the previously made studies employ a similar econometric model. The dependant variable in the model is a measure of domestic bank performance, the explanatory variables include the variable of the share of foreign banks in the domestic banking system and two groups of control variables, namely financial variables for domestic banks, and country variables.

The main measures of performance used in the model are the following:

- net interest margin to total assets
- non-interest income to total assets
- before tax profits to total assets
- overhead to total assets
- loan loss provisions to total assets

Let me now discuss the conclusions made by different authors about the influence of foreign banks presence on the domestic banks performance.

The first issue is how foreign banks entry influences costs in banking sector. The costs in the industry are divided into two groups: costs of funding – the percentage bank pays for attracting of external funds, and overhead expenses. The cost of funding, which include deposit interest rate and interbank interest rate depends mostly on macroeconomic conditions and the monetary policy. Overhead expenses determine the efficiency of bank organization. Thus, under

change of costs in banking sector as a consequence of increased competition, authors usually mean change in overhead expenses.

Claessens, *et al.* (2001) use a large data set containing individual bank accounting information of domestic banks in 80 countries (including 6 transitional countries) for the period 1988-1995. The authors conclude that increased presence of foreign banks is associated with significant reductions of domestic banks profitability, and less significant reductions of their non-interest income and overhead expenses, which lead to positive efficiency effects at domestic banks. Also, the results show no significant impact on interest margins and loan loss reserves.

An interesting conclusion is that the efficiency effects occur as soon as foreign banks enter the market and they do not depend on the market share of foreign banks. Thus, they conclude that foreign bank presence promotes efficiency and improves the functioning of domestic banks.

Also, Claessens, *et al.* (2001) emphasise that there is interrelationship between low banking costs and the level of foreign banks entrance into the economy. Authors find significant influence of low banking costs on the foreign banks entrance. Low cost environments are directly attractive to foreign banks, but indirectly low banking costs may also be an indicator of a competitive banking environment including entry possibilities for foreign banks.

Claessens and Lee (2002) study the influence of foreign bank presence on the domestic banks performance in 39 low-income countries, which also include 8 transitional low-income countries, for 1995-2000 data. The only statistically significant result in the model is lowering of margins of domestic banks due to increase of foreign banks presence. The positive (but not significant) effect for non-interest income may reflect that domestic banks are also encouraged to broaden their range of products and services as a result of foreign bank entry. Also, foreign entry leads to insignificantly higher overhead costs in domestic banks, which may reflect pressures for higher wages and cost increases due to assimilation of new banking techniques. Thus, in low-income countries this effect overshifts the cost decreasing effect of more efficient management and organizational structure. The before tax profits are found to be positively but not significantly influenced by foreign bank entry. Loan loss provision is still insignificantly and negatively influenced by the change in foreign bank share.

Another study shows that influence on costs depends on the level of economic development of the recipient country (Hermes and Lensink, 1996). The study is made for 982 banks in 48 countries for the period 1990-1996. It runs different regressions (OLS method), one of which shows the influence of foreign banks presence and financial development of a country on the overhead expenses of domestic banks, and another one – influence of the same variables on margins (interest income minus interest expense to total assets).

The conclusions are that, at least in the short term, foreign bank presence is associated with higher costs and margins of domestic banks at lower levels of financial development, while foreign bank presence is associated with falling costs and margins of domestic banks at higher levels of financial development. The non interest income is found to be positively and significantly related with increase of the foreign bank presence in the developing and transitional countries. The results also suggest that at low levels of financial development the rise of overhead expenses is stronger than the rise of margins, leading to reduced profits, whereas at high levels of financial development the fall in costs is stronger than the fall of margins, leading to increased profits. The study on Colombia (Barajas et. al., 2000) supports the results confirming increase in costs for domestic banks after foreign bank entry.

The interpretation of results is following: at lower levels of financial development, the gap between the development of foreign and domestic banks is large. Thus, the costs of domestic banks increase considerably due to investments in implementation of new techniques and practices. But due to the still strong market power in domestic financial markets, the banks raise the fees for their services to pay for investments they made. At the higher levels of financial development the gap is smaller and domestic banks just need to reduce costs and become more efficient.

Green et al. (2003) use a panel of 273 foreign and domestic banks located in 9 East European countries for 1995-1999 period studying whether there is a

difference between efficiency of foreign and domestic banks. They conclude that there is little or no empirical evidence that bank ownership (foreign vs. domestic) is an important factor in reducing the banks' total costs, indirectly supporting with this the conclusion of Claessens, *et al.* (2001) that the efficiency effect occurs as soon as foreign banks enter the market and the efficiency does not change with the change of market share of foreign banks.

Denizer (2000) uses panel data for Turkish banking sector for 1980-1997 period and employs fixed effects and random effects estimators for studying foreign entry influence on the performance of Turkish banks. As the measure of performance the author uses net interest margin, overhead expenses, and return on assets. The model of Denizer (2000) is different from those of other researchers in the area. The explanatory variables, as well as dependant variable are applied in levels, not in first-differences. Thus, the author mostly concentrates on how the share of foreign banks in domestic banking sector and their market share influence net interest margin, overhead expenses, and return on assets of the domestic banks. Another difference is that author adds Herfindahl-Hirshman index for banking industry and bank branch share (number of branches for each bank to total number of branches in the system) to the set of explanatory variables. But due to the shortcoming in presenting of the paper (most of explanatory variables included in the model are not explained), it is difficult to judge about overall efficiency of the model. The author concludes that neither share of foreign banks in domestic banking sector nor their market share is



related to net interest margin in a significant way. Another conclusion is that the increase of foreign banks share in the banking sector significantly decreases the overhead expenses. The result is surprising and clashes with Green et al. (2003) and Claessens, *et al.* (2001) conclusions of absence of such influence, emphasizing that not the share of foreign banks matters but exactly the fact of new foreign entry decreases the costs. Another important result is that increase in foreign bank share leads to decrease of domestic bank profits. This result is consistent with conclusion of Hermes and Lensink (2003) that at higher levels of financial development foreign entrance leads to decrease in profits.

Table 1 presents conclusions to changes in interest rate margins, profits, and overhead as a consequence of foreign bank entry.

Most of the previously made studies use data of no later than 1995-1996. Until 1996 most transitional countries had only 5-7 years of their market economy building experience. The next five years brought a lot of new developments in financial sector: the range and quality of financial services increased, domestic banks grew, the leading banks were distinguished, etc. The number of foreign banks increases considerably year by year. Thus, the new influences of foreign banks on the domestic banking sector may have appeared, which are not disclosed in the previously made studies. Only the study of Claessens and Lee (2002) use the data for 1995-2000 but Russia is not included in the study. In my research I will test the impact of foreign banks on the domestic

banks on the basis of 1998-2003 data set and will compare it with conclusions already made by other authors for developed countries.

**Table 1. Changes in interest rate margins and profits as a consequence of foreign bank entry<sup>5</sup>.**

	In developed countries	In developing countries
Claessens and Lee (2002)	-	Int. rate margin*** ↓ Non-int. income ↑ Profits ↑ Overhead ↑
Hermes and Lensink (1996)	Int. rate margin*** ↓ Profits*** ↑ Overhead *** ↓	Int. rate margin*** ↑ Non-int. income*** ↑ Profits*** ↓ Overhead *** ↑
Denizer (2000) (For Turkey)	-	Int. rate margin ↑ Profits ↓ Overhead * ↑

The study can be important for domestic banks in order to work out the strategy of future development and predict future costs and profits taking into account changes in the market after foreign bank entrance. Also it will be useful for domestic regulatory authorities for creation of the policy of financial sector

<sup>5</sup> \*\*\*) and \*) denote significance level of 10 and 1 percent respectively

regulation, especially regarding foreign entrance; and it can be useful for foreign banks, which intend to enter the developing financial markets of Russia and Ukraine for predicting future changes in the markets.

### Chapter 3

#### METHODOLOGY AND DATA

Most of the previously made studies use a similar model for estimation the influence of foreign banks entrance on the domestic banks performance.

The estimation equation is the following:

$$\Delta I_{it} = a + b\Delta FS_t + b_i \Delta B_{it} + b_j \Delta X_t + \varepsilon_{it}$$

where  $\Delta$  is the difference operator;  $I_{it}$  is the dependent variable, which is one of the indicators of bank performance for domestic bank  $i$  at time  $t$ . The main indicators of performance used are: net interest margin to total assets, non-interest income to total assets, before tax profits to total assets, and overhead to total assets. Thus, four different equations are estimated.

$FS_t$  is the share of foreign banks at time  $t$  (i.e., the number of foreign banks divided by the total number of banks or share of foreign bank assets in total bank assets).

$B_{it}$  is financial variables for domestic bank  $i$  at time  $t$ . Financial variables usually include factors either from the asset side or from the liabilities and capital side of the bank balance sheet. The composition of both assets and liabilities and capital directly influence bank performance, but since the structure of assets heavily depends on the structure of liabilities and capital, only factors from one part of the balance sheet can be used in the estimation. In the current research

the data from the assets side will be used because they are more detailed in the available data set. The financial variables for Ukraine include total loans to total assets, portfolio of securities to total assets, and fixed assets to total assets. The financial variables for Russia are the following: corporate loans to total assets, interbank loans to total assets, government bonds holdings to total assets, and reserves to total assets. The variables for Ukraine and Russia are different because of the restrictions of the available data.

$X_t$  is country variables at time  $t$ ; country variables include growth rate of GDP, inflation rate and real interest rate. The country variables are included in the equation since the change of them has direct influence on the financial sector and, thus, on the performance of banks.

$A$  is a constant,  $b$ ,  $b_i$  and  $b_j$  are coefficients, and  $\varepsilon_{it}$  is an error term.

The regression is specified in first differences for both left and right hand side variables since the effect of changes in foreign bank presence, that is, new entry or increase of foreign bank capital, on changes in the performance of individual domestic banks is investigated. The method of estimation is OLS. I report heteroscedasticity-corrected standard errors.

The dataset for Ukraine includes 46 banks (they concise more than 80% of the total assets of the Ukrainian banking sector) for the period 2002-2003 quarterly<sup>6</sup>. The dataset for Russia accounts for 50 banks (they concise more than

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<sup>6</sup> The source: Visnyk NBU [The Bulletin of the National bank of Ukraine], #1 1998 - #1 2004; Finansovyje riski [The Financial Risks], #1 2002 - #4 2001

70% of the total assets of the Russian banking sector) for the period 1998-2002 yearly<sup>7</sup>. This means I have 322 observations for Ukraine and 200 observations for Russia. Only domestic banks observations have been used in the analysis.

Regression is specified in first differences, thus fixed effects among individual banks will be removed. But still fixed effects in growth of individual banks can exist (some banks can instantly grow quicker than others). In order to decide, which of the estimation techniques to use I conduct the F-test:

H0: pooled regression

H1: Fixed Effects

$F = 0.5513$  is low, cannot reject H0.

The F-test indicates on the better appropriateness of the pooled regression.

The usage of random effects is inefficient for the current research since the sample covers 70-80% of the population.

It is internationally recognized that foreign banks are those, which have more than 50% of foreign ownership. Although, Ukrainian statistics accounts for the number of foreign banks with 100% foreign ownership and more than 10%

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<sup>7</sup> The source: Official Internet cite of the Central bank of Russia, [www.cbr.ru](http://www.cbr.ru)

of foreign ownership only. Thus, 100% foreign ownership banks are included in the estimation for Ukraine. In Russia the statistical information is available for both 100% foreign ownership banks and more than 50% foreign ownership banks. Thus, I make two separate groups of estimation according to the two types of statistical information. The time dummies are not included because, together with moderate number of observations I have and big enough number of variables included in the regression, they create the problem of multicollinearity.

## *Chapter 4*

### RESULTS

The estimation results for Ukraine in Table 1a indicate that entry of a foreign bank is associated with a statistically significant increase of interest rate margins of domestic banks (“equation 1” column). Also, the foreign entry does not have significant influence on the non-interest income, before tax profits and overhead expenses of domestic banks.

The result concerning interest rate margins is consistent with the result of Hermes and Lensink (1996) for developing countries. Foreign banks in Ukraine work mostly in corporate banking market. Having excess to the cheap funds of their mother companies, they create high competition for the local richest corporate clients in the Ukrainian market, decreasing the market share of the biggest Ukrainian banks. In order to keep high profits, Ukrainian banks use their still high market power in the retail banking market and slightly increase interest rate for loans and decrease interest rate for deposits, which allows them to increase net interest rate margin. As we can see from the “equation 1” column of the Table 1a, unit rise of the number of foreign banks leads to increase of the ratio of non-interest income to total asset of domestic banks by 0.35 p.p. (percentage points).



Table 1a (“equation 2” column) indicates that foreign entry has positive but not significant influence on the non-interest income of domestic banks. From the value of coefficient we can know that increase of number of foreign banks by one leads to increase of the ratio of non-interest income to total asset of domestic banks by 0.04 p.p. So small increase reflects that foreign bank entry does not encourage domestic banks to broaden their range of products and services, and the reason of this is still very low presence of foreign banks in the Ukrainian market (foreign banks account for 4.5% of the total number of banks and 5% of the total assets of banks in Ukraine).

The result for overhead expenses (“equation 3” column of the Table 1a) shows that foreign bank entrance does not introduce any significant pressure on wages in domestic banking sector. Really, it is not a secret that wages in foreign banks in transitional and developing countries are considerably lower than those in domestic banks. The fact can be explained by different reasons. First, foreign banks employ the best specialists in finance, the number of whom is very limited in Ukraine. Since the quality of foreign banks personnel is considerably higher, the wages in foreign banks cannot directly present pressure on the wages in domestic banks. Second, foreign banks pay higher wages as a consequence of image and international standards considerations, which also cannot present pressure on the wages in domestic banks. The results of no statistically significant influence on personnel expenses are consistent with Claessens and Lee (2002) finding.

Before tax profits are found not to be significantly influenced by foreign bank entrance (“equation 4” column of the Table 1a). Since interest rate margin rose and non-interest income and overhead expenses did not significantly change, before tax profits should have risen. The explanation of the negative sign of the profits variable can be attributed to the accounting tricks, which are widely used by many Ukrainian companies in order to decrease tax burden.

The Table 1b reports the estimation results with alternative indicator of foreign bank share: the share of foreign bank assets in the total bank assets. Coefficient of foreign bank share in any of the regressions is statistically significant, which means that not expansion of foreign banks in the host country influence the performance of domestic banks but new foreign bank entry. Same conclusion is made by other authors (Claessens et al, 2001, Denizler, 2000).

The results for Russia are shown in Tables 2a and 2b. Table 2a reports results of estimation with foreign bank share to be the ratio of the number of banks with foreign ownership of more than 50% to the total number of banks; in Table 2b estimation results foreign bank share is the ratio of 100% foreign banks to the total number of banks. The results of the two different estimations have identical significance. From the “equation 1” column of the tables we can see that entrance of foreign bank leads to decrease of the ratio of net interest margin to total assets of domestic banks by 0.12 p.p. in the first case and 0.05 p.p. in the second case. Entry of new foreign banks forces domestic banks to lower net interest margins in order to be competitive and keep their clientele. The result

is different from that of Ukraine, and can be explained by the fact that most of the foreign banks in Russia work in both corporate and retail banking segments of the banking services market, and, thus, increase competition for clients in both segments.

“Equation 2” column of the Tables 2a and 2b shows that there is no significant influence of the foreign bank entry on the non interest income of domestic banks. The result is similar to that for Ukraine and indicates that foreign bank entry does not encourage domestic banks to broaden their range of products and services.

A significant negative impact on the personnel expenses is produced by foreign bank entry (“Equation 3” column). In order to compete with foreign banks, domestic banks need to decrease their personnel expenses. The entrance of foreign banks in Russia stimulates local bank managers to optimize the amount of personnel.

Although net interest margins decrease and overhead expenses rise as a consequence of new foreign bank entry, domestic banks still succeed to increase their profits through optimisation of personnel expenses (“Equation 5” column). But the result is not reliable because of high possibility of usage accounting tricks in calculations of overhead expenses and profits.

Turning to control variables, we see that net interest margin is positively related with corporate loans and interbank loans, which points on the efficient assets management in the domestic banks. A positive relationship between

inflation and net interest margin and negative one between inflation and personnel expenses (“equation 3” column) is consistent with the belief that high inflation leads to higher bank margins, since banks tend to include overestimated inflation in the interest rate they propose, and lower costs because of wage rigidities. The higher GDP growth leads to statistically significant decrease of net interest rate margins of domestic banks and, thus, supports the economic theory concept of lowering of interest rate in the times of economic expansion.

## CONCLUSIONS AND POLICY IMPLICATIONS

In the work the influence of foreign bank entrance on the domestic bank performance is investigated. The results point out that foreign bank entrance introduces significant efficiency gains in the domestic banking sector of Russia and makes a moderate impact on the performance of domestic banks in Ukraine.

The results suggest that foreign bank entry has positive and significant influence on interest rate margin of domestic banks in Ukraine. The reason of the fact is found in still high market power of domestic banks in the retail banking market. Since foreign banks operate mostly in the corporate banking market, where they increase competition considerably due to access to cheap funds of their mother companies, domestic banks use their market power in retail banking and slightly increase interest rate for private loans and decrease interest rate for private deposits in order to keep high profits.

The result for Russia is different and indicates that foreign bank entry negatively and significantly influences net interest margin of domestic banks in the country. The result is anticipated since foreign banks in Russia operate in both corporate banking and retail banking markets creating competitive pressure on domestic banks and forcing them to decrease interest rates for credits and keep interest rate on deposits in order to keep their clientele.

It is shown that foreign bank entry does not stimulate the development of new technologies and products in domestic banks in both countries (non interest income of domestic banks rises significantly due to foreign bank entry).

An important finding is negative and significant influence of foreign bank entrance on the personnel expenses of the local banks in Russia. Since average wage in Russia has been constantly rising since 1999, the result is attributed to the optimisation of the volume of personnel in the Russian banks and, thus, produces the cost efficiency gains.

The personnel expenses of Ukrainian banks are not found to be significantly influenced by foreign bank entry.

The results for profits are ambiguous and can be attributed to the accounting tricks, which are widely used by many Russian and Ukrainian companies in order to decrease tax burden.

An interesting finding is that the number of foreign players rather than their size influences the domestic banks operation.

Unfortunately, the data set available for the analysis does not allow me to deal with the long-term effects of foreign bank presence. As longer data on foreign bank presence and domestic bank performance become available, both short-term and long-term effects can be investigated through estimation of dynamic error correction model.

Foreign banks do not introduce efficiency gains in the domestic banking market in Ukraine. The reason of this lies in very low foreign bank presence in

the country (foreign banks consist 4.5% of the total bank number and their assets concise 5% of the total bank assets, while the figures for Eastern European transitional countries are 54% and 52% correspondently and for developed countries – 25% and 15%<sup>8</sup>). Although foreign banks stimulate efficiency rise in the Russian banking sector and increase consumers' gain, since net interest rate margin of banks decrease, they still do not stimulate development of new banking products and technologies, which evidence about quite low foreign presence in Russia (3% of the total bank number and 8% of the total bank assets<sup>8</sup>).

The governments of Russia and Ukraine should create the conditions for attracting of foreign banks in their countries. The stable legislation, effective regulatory environment, and decrease of so-called “country risk” are conditions for foreign bank entrance, which are the most frequently mentioned by experts<sup>9</sup>.

Expansion of foreign bank presence should contribute into the decrease of interest rate in Ukraine, which is very high now (real interest rate for credits is 9.7% in 2003<sup>10</sup>, while in Russia it is 1%<sup>11</sup>). Decrease of interest rate should lead to quicker economic growth, the speed of which has been slowing down during the last years. Also, increase of foreign bank presence should raise cost efficiency of the domestic banking markets, and stimulate development of new banking

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<sup>8</sup> See page 5

<sup>9</sup> “Stabilny I Opasny” [Stable and Dangerous], *Kompanion* #13 (321) 28.03-03.04 2003

<sup>10</sup> [www.bank.gov.ua](http://www.bank.gov.ua)

<sup>11</sup> [www.cbr.ru](http://www.cbr.ru)

products and technologies, the evidence of which is found for both developed and developing countries by many researchers<sup>12</sup>.

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<sup>12</sup> See the Literature Review, Chapter 2 of the paper.



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## APPENDICES AND TABLES

### **Appendix 1. List of Variables**

#### Variables for both Ukraine and Russia:

ForBankNumber - number of foreign banks divided by the total number of banks in the country

ForBankShare - share of foreign bank assets in total bank assets in the country

$\Delta$ Net int margin – net interest rate margin

$\Delta$ Non-int.Income – non-interest income

PersnExp – personnel expenses

$\Delta$ BTProfits – before tax profits

Infl - Inflation

RealintRate – real interest rate

GDPgrowth – real GDP growth rate

#### Specific Variables For Ukraine:

TotLoans – total loans

FixedAssets – fixed and intangible assets

Secur – portfolio of securities

#### Specific Variables For Russia:

Corporate Loans – corporate loans

Gov. Bonds – government bonds

Reserves – reserves on the Central Bank of Russia account

Interbank Loans – interbank loans

Overhead – overhead expenses, which include non-interest expenses, personnel expenses, and other expenses

**Table 1a. Ukraine. Foreign Bank Entry and Change in Domestic Bank Performance: Alteration in Number of Foreign Banks<sup>13</sup>**

	$\Delta$ Net int margin/ta eq-n 1	$\Delta$ Non- int.Income/ta eq-n 2	$\Delta$ PersnExp/ta eq-n 3	$\Delta$ BTProfits/ta eq-n 4
<b><math>\Delta</math>FoBankNumber*100</b> <b>(p-value)</b>	0.40** (0.018)	0.041 (0.507)	0.053 (0.754)	-0.032 (0.321)
<b><math>\Delta</math>TotLoans</b>	0.013*** (0.000)	0.002 (0.523)	0.009 (0.137)	0.003** (0.031)
<b><math>\Delta</math>FixedAssets</b>	0.011 (0.586)	0.024** (0.032)	0.081* (0.064)	0.023*** (0.001)
<b><math>\Delta</math>Secur</b>	0.035** (0.021)	0.001 (0.772)	0.016* (0.064)	0.003 (0.226)
<b><math>\Delta</math>PersnExp</b>	0.063 (0.137)	0.030* (0.072)	-	0.008 (0.445)
<b>GDPgrowth</b>	0.170*** (0.000)	0.015 (0.344)	0.036 (0.473)	0.000 (0.925)
<b>Infl</b>	0.041** (0.021)	0.020** (0.035)	0.018 (0.273)	-0.004 (0.402)
<b><math>\Delta</math>RealintRate</b>	-0.012** (0.039)	0.002 (0.573)	0.006 (0.507)	-0.001 (0.447)
<b>R-squared</b>	<b>0.223</b>	<b>0.089</b>	<b>0.056</b>	<b>0.144</b>
<b>Prob(F-statistic)</b>	<b>0.000</b>	<b>0.001</b>	<b>0.030</b>	<b>0.000</b>

Note: Method of estimation – pooled least squares with White Heteroskedasticity-Consistent Standard Errors & Covariance. All variables except GDP growth and Inflation are in first differences. P-values of t-stat are presented under each coefficient. \*) denotes significance at 10 per cent level; \*\*) denotes significance at 5 per cent level; \*\*\*) denotes significance at 1 per cent level.

<sup>13</sup> Foreign banks are considered as banks with 100% foreign ownership

**Table 1b. Ukraine. Foreign Bank Entry and Change in Domestic Bank Performance:  
Alteration in Total Assets of Foreign Banks<sup>14</sup>**

	$\Delta$ Net int marg/ta (equation 1)	$\Delta$ Non-int.Inc/ta (equation 2)	$\Delta$ PersnExp/ta (equation 3)	$\Delta$ BTProfits/ta (equation 4)
$\Delta$ ForBankShare (p-value)	-0.214745 (0.2712)	-0.085119 (0.4241)	0.262851 (0.3552)	-0.065344 (0.1104)
$\Delta$ Total Loans	0.01244*** (0.0018)	0.001537 (0.4986)	0.008001 (0.1381)	0.00365** (0.0136)
$\Delta$ Fixed Assets	0.008388 (0.7285)	0.022403** (0.0493)	0.08577** (0.0489)	0.0218*** (0.0022)
$\Delta$ Securities	0.036122** (0.0111)	0.001191 (0.7547)	0.01627* (0.0684)	0.003143 (0.2375)
$\Delta$ PersnExp	0.068461 (0.1244)	0.031076* (0.0653)	-	0.008932 (0.4042)
GDP growth	0.078768* (0.0524)	-0.005150 (0.8160)	0.070848 (0.2732)	-0.005164 (0.5263)
Inflation	0.066743 (0.1409)	0.034928 (0.1093)	-0.036838 (0.5804)	0.011089 (0.2041)
$\Delta$ Real Int. Rate	0.009102 (0.6818)	0.011048 (0.3476)	-0.023854 (0.5005)	0.006461 (0.1335)
R-squared	0.204578	0.090767	0.059106	0.147603
Prob(F-statistic)	0.00000	0.001187	0.021083	0.000001

<sup>14</sup> Foreign banks are considered as banks with 100% foreign ownership

See Note to Table 1a

Table 2a. Russia. Foreign Bank Entry and Change in Domestic Bank Performance:  
Alteration in Number of Foreign Banks<sup>15</sup>

	$\Delta$ Net int marg/ta (equation 1)	$\Delta$ Non- int.Inc/ta (equation 2)	$\Delta$ Personnel exp/ta (equation 3)	$\Delta$ Overhead/ta (equation 4)	$\Delta$ BTProfits/ta (equation 5)
$\Delta$ forBankNumber*100 (p-value)	-0.123** (0.0289)	0.017 (0.629)	-0.032* (0.051)	0.623** (0.024)	0.088 (0.256)
$\Delta$ Corporate Loans	0.010** (0.029)	0.001 (0.849)	0.002** (0.015)	0.001 (0.971)	0.000 (0.905)
$\Delta$ Gov. Bonds	0.007 (0.142)	-0.002 (0.426)	0.000 (0.913)	-0.026 (0.272)	0.001 (0.852)
$\Delta$ Reserves	0.003 (0.572)	0.004 (0.321)	0.002 (0.127)	0.013 (0.654)	0.005 (0.275)
$\Delta$ Interbank Loans	0.006* (0.061)	0.001 (0.476)	-0.000 (0.920)	-0.011 (0.614)	0.000 (0.954)
$\Delta$ Overhead	0.020 (0.152)	-0.008 (0.176)	-	-	-0.040 (0.303)
GDP growth	-0.076* (0.054)	-0.002 (0.942)	-0.027** (0.020)	0.289 (0.124)	0.038 (0.483)
Inflation	0.020** (0.025)	-0.002 (0.656)	0.002 (0.427)	-0.069* (0.072)	-0.790 (0.431)
R-squared	0.145	0.043	0.241	0.074	0.050
Prob(F-statistic)	0.000	0.389	0.000	0.036	0.270

<sup>15</sup> Foreign banks are considered as banks with more than 50% of foreign ownership

See Note to Table 1a

**Table 2b. Russia. Foreign Bank Entry and Change in Domestic Bank Performance:  
Alteration in Number of Foreign Banks<sup>16</sup>**

	$\Delta$ Net int marg/ta (equation 1)	$\Delta$ Non- int.Inc/ta (equation 2)	$\Delta$ Personnel exp/ta (equation 3)	$\Delta$ Overhead/ta (equation 4)	$\Delta$ BTProfits/ta (equation 5)
<b>DforBankNumber*100</b> (p-value)	-0.049** (0.029)	0.007 (0.629)	-0.012* (0.051)	0.245** (0.024)	0.035 (0.256)
<b><math>\Delta</math>Corporate Loans</b>	0.010** (0.029)	0.001 (0.849)	0.002** (0.015)	0.001 (0.971)	0.000 (0.905)
<b><math>\Delta</math>Gov. Bonds</b>	0.007 (0.142)	-0.002 (0.426)	0.000 (0.913)	-0.026 (0.272)	0.001 (0.852)
<b><math>\Delta</math>Reserves</b>	0.003 (0.572)	0.004 (0.321)	0.002 (0.127)	0.013 (0.654)	0.005 (0.275)
<b><math>\Delta</math>Interbank Loans</b>	0.006* (0.059)	0.001 (0.476)	-0.000 (0.920)	-0.011 (0.614)	0.000 (0.954)
<b><math>\Delta</math>Overhead</b>	0.020 (0.152)	-0.008 (0.176)	-	-	-0.040 (0.303)
<b>GDP growth</b>	-0.004 (0.732)	-0.012 (0.106)	-0.008*** (0.002)	-0.079 (0.216)	-0.014 (0.303)
<b>Inflation</b>	0.002 (0.613)	0.000 (0.937)	-0.003*** (0.000)	-0.024 (0.267)	0.005 (0.417)
<b>R-squared</b>	0.145	0.043	0.241	0.074	0.050
<b>Prob(F-statistic)</b>	0.000	0.389	0.000	0.036	0.269

<sup>16</sup> Foreign banks are considered as banks with 100% foreign ownership

See Note to Table 1a