

THE PERFORMANCE OF FOREIGN AND DOMESTIC BANKS IN UKRAINE

The financial crisis resulted in the devastation of the financial sector of Ukraine. The banking sector was hit severely. The numbers indicate that the losses of the banks as of 01.01.2010 amounted to 38 billions UAH. The process of bank liquidations speeds up: today 14 banks are being under liquidation because of unprecedented losses. Foreign banks operating in Ukraine were not an exception in this major chaos.

The share of the foreign capital in the banking system of Ukraine - 35% - is significant, although smaller compared to Central and Eastern European countries. (Bank Austria, 2008) It is usually assumed that if the bank is foreign, it is more reliable, safer, since it has strong support from parental bank; it is less exposed to liquidity or credit risks because of better risk management practices. The international brand is very attractive. The range of services it offers is much wider than of those offered by domestic banks. However, there are also concerns about foreign banks: they usually cherry-pick the best credits, tend to lend in good times but stop lending in bad times. They are very competitive because of the access to the cheaper resources from abroad. Borrowing from abroad results in external debt accumulation of a country. Consumer lending is used for financing the imports worsening the trade balance.

It is interesting to check who is performing better during the financial instability. This paper examines the difference between domestic and foreign bank performance in Ukraine in years 2006 and 2009. The analysis shows that foreign banks were less affected by the crisis than domestic banks.

The main data source used in this study is the Ukrainian National Bank's Statistics on financial state of banks in Ukraine. The data comprises 179 banks which have the license of the National Bank of Ukraine to perform banking transactions. There are 51 banks with participation of foreign capital, out of which 18 banks with 100% foreign capital. However, the National bank does not distinguish between truly foreign banks entering the Ukrainian banking sector with highly developed management practices, particularly risk management, and banks which are owned by entities registered in offshore regions and therefore these banks do not belong to the group of interest. For example, there are several banks owned by companies with limited liability from Cyprus, one of those belonging to the top-ten Ukrainian banks. To remain consistent with the purpose of this study those banks are not considered as foreign.

The analysis focuses on a limited number of variables. As an indicator of the bank performance the Return on Assets (ROA) is used. It is computed as a net profit (loss) of the bank divided by total assets. The point of using a ROA formula is to measure a company's profitability by comparing its net income to its assets. The ROA formula does just that; it divides net income by total assets, which includes shareholder's equity plus all borrowings. Thus, the bank's size can be accounted for, as opposed to just comparing net profits (losses) of the bank which would cause inconsistency of the analysis. To account for the ownership the binary variable is introduced which is going to be the main explanatory variable. A crisis dummy variable is also introduced.

The basis of the analysis is two cross-sectional data sets, collected before and after the event of interest - the crisis. The years considered are 2006 and 2009: a stable time in the banking sector and the crisis period. A two-year panel data set is also constructed. There is a difference in the number of observations in 2006 and 2009 due to the fact that there were some fluctuations in the banking sector: new banks were registered and several banks went out of business. For example, as of 01.01.2010 there were 14 banks being liquidated.

The model is estimated by OLS the following equation

$$ROA_{it} = \beta_0 + \delta_0 * 2009dt + \beta_1 * foreign_{it} + \beta_2 * foreign_{it} * 2009dt + u_{it}$$

where index i refers to the bank in a sample, t is a time index. ROA_{it} is the return on assets (ROA: profit after tax/total assets) of the bank i at time t . The intercept β_0 is a constant and reflects the average ROA of the bank in 2006. $2009dt$ is a crisis dummy variable which equals zero when $t = 2006$ and one when $t = 2009$. It does not change across i , which is why it has no i subscript. δ_0 captures the change in all banks' ROA from 2006 to 2009. $foreign_{it}$ is an ownership dummy variable for bank i at time t which takes values 1 if the bank is foreign and 0 if domestic. The coefficient β_1 measures the effect of the foreign ownership before the crisis occurred, i.e. the difference in ROA of foreign and domestic banks in 2006. $foreign_{it} * 2009dt$ is the interaction of two dummies described earlier. The parameter of interest β_2 on this interaction term measures the difference between ROA of domestic and foreign banks during the crisis.

It is estimated that the average return on assets of the bank in 2006 was 1.2 %. Due to the crisis in 2009 the banks experienced a 17% fall of their ROA on average. Average ROA of the bank in 2009 can be calculated: $1.2 - 17 = -15.8\%$. However, being concerned that the estimation results are influenced by one or several observations, so-called outliers or influential observations (see Figure 1), let us see what happens if they are dropped out. Dropping four outliers (those are domestic banks on the edge of liquidation, whose ROA fell sharply by more than 300%: "Transbank", "Arma", "Ipobank", "Dnister") from the regression analysis makes the OLS estimates change by large amount. Now, the extent to which the crisis hit the banking sector is different, although main result stays the same: there is a significant difference between the profitability of foreign and domestic banks.

After leaving out the outliers the change in the average ROA of all banks is - 12.9%. Note that the effect of the foreign ownership before the crisis occurred is very small: foreign banks have ROA higher than domestic by 0.043 % in 2006. This is not significant at all. So, on average there was no difference in ROA between foreign and domestic banks before the crisis.

The most important finding is the dif-in-dif estimator: the difference between ROA of domestic and foreign banks during the crisis was 9.4%. ROA of foreign banks was higher by 9.4% than domestic bank's, on average, although average ROA of the foreign bank during the crisis was negative: -2.311 %. We get our expected result: foreign banks operating in Ukraine were hit by the crisis to much lesser extent than domestic banks were.

So far, the panel nature of the database has not been used. When first difference of ROA is taken the equation becomes

$$\Delta ROA_{it} = \beta_0 + \beta_1 * foreign_{it} + u_{it}$$

where " Δ " denotes the change from 2006 to 2009. The intercept is actually the change in the intercept from 2006 to 2009; however, the whole equation can not be first-differenced since the foreign ownership dummy does not vary over time. Now the co-

efficient on *foreign* can be interpreted as the difference between domestic and foreign bank's change in ROA.

The model is estimated without the outliers as in the previous case. As expected, the results are very similar to those from pooled cross sections. They might be slightly different because of the change in the number of observations since some data on banks was missing in 2006 for corresponding 2009 observations. On average foreign bank's ROA decreased only by 2.3% while domestic bank's by 11.7%. Again, the results confirm our initial hypothesis of foreign banks being more protected in the crisis period than domestic banks.

How does the foreign ownership influence the probability of going bankrupt, or at least the probability of a bank to experience a relatively large change in ROA (10%)? The following two models are estimated:

$$10\% \Delta ROA_i = \beta_0 + \beta_1 * foreign_i + u_i$$

$$bankrupt_i = \beta_0 + \beta_1 * foreign_i + u_i$$

where the first equation shows the probability of a 10% change in ROA. $10\% \Delta ROA_i$ is a binary variable which is 1 when the bank experienced a 10% change in ROA from 2006 to 2009 and the coefficient on the binary variable *foreign_i* estimates the difference between domestic and foreign banks. The second equation looks at the extreme case of the first one, namely probability of going bankrupt.

The main finding of this research suggests that foreign banks operating in Ukraine performed better than domestic during the crisis period. The difference in performance was significant: ROA of foreign banks was higher by 9.4% than domestic bank's on average. One explanation for such difference is a strong parental support to foreign banks during the crisis. Also foreign banks were more conservative in consumer lending. Consumer lending resulted in non-performing loans and was the major cause of bank losses.

It should be taken into account that the main explanatory variable - binary variable indicating foreign ownership - might not satisfy exogeneity assumption. In fact, it is likely to be endogenous because foreigners did not buy banks randomly, but carefully studied the bank's performance and chose better ones. So the difference between the banks' performance during the crisis might not be due to the fact that foreign owners did something great to do better than domestic banks. There is a possibility of an upward bias in the estimator of the main interest and the estimated difference might be actually smaller.

Two linear probability models estimated during the research indicate that due to the fact that no foreign bank went bankrupt the corresponding probability of a foreign bank to experience bankruptcy is zero. However, there was a positive probability for domestic bank to go bankrupt - almost 12%. Another finding was that due to the fact that some foreign banks experienced a 10 % change in their ROA, the corresponding probability was positive but smaller relative to domestic banks. Those were foreign banks which were actively involved in consumer lending.

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