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THE IMPACT OF ACQUISITIONS ON PROFITABILITY: EVIDENCE FROM THE BANKING SECTOR IN SERBIA

The aim of the paper is to look at the impact of takeover processes on the profitability of banks by analyzing periods prior to and after the takeover, as well as the factors that influenced the movement of banks' profitability. In 2001 there were 86 banks operating in the Serbian market, in 2003 that number was 49, whereas today there are 30 banks operating on the Serbian market and 23 thereof are foreign-owned. The study sample encompasses all banks taken over in the Serbian market in the period from 2001-2012. Methods applied in this study are: discriminant analysis and linear regression. Profitability of taken over banks was lower in comparison with the banking sector average. However, comparison of banks' profitability prior to and after the takeover, by introducing the dummy variable in the regression model, showed a substantial positive effect of the takeover on bank profitability. The increase of assets and the decrease of operating expenses had a positive influence on bank profitability movement and on medium-term gain in banks' market share. The contribution is in the prediction of potential targets and evaluate the market attractiveness of Serbia for further acquisition processes.
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Introduction

Restructuring process of Serbian banking system started in 2001. At the beginning of 2001 banking system included 86 banks, their number was 49 at the end of 2001, whereas today it is 30. Transformation of the banking system of Serbia encompassed restructuring bank ownership through privatization process that referred to buying shares of the banks with majority state capital by foreign banks. Transforming state-owned and socially-owned property into private property created the first prerequisite for the continuance of the bank restructuring process through mergers and acquisitions. According to the report of the National Bank of Serbia for year 2002 the most significant activities regarding ownership restructuring of the banking sector referred to putting into effect law regulations that solved long-standing problem of banking sector – immobilization of over 50% of balance sum of the most significant banks on the basis of old foreign currency savings of citizens and deferral of long-term foreign currency loans. During this period a large number of banks was closed down including the biggest financial institutions in the country, and several new banks were founded, mostly owned by foreign banks and ownership reform of the banking sector began through debt-for-equity conversion of Paris and London Club debt and old foreign currency savings debt. During 2003 reform continued in several directions. One of them was continuance of a policy that directs foreign investors to buy domestic banks till the end of privatization process of banks with majority state capital. According to the report of the National Bank of Serbia for the third quarter of 2012, there are 33 banks operating in the Serbian banking sector, of which: 21 banks in foreign ownership and 12 banks in domestic ownership (9 thereof have the state as a majority owner or largest individual shareholder and 3 banks are owned by private individuals).

Foreign-owned banks dominate and account for 74% of total assets in the banking sector, 74% of capital, 70% of employees and earned a profit of 6.6 billion RSD (70% of earned profit in the banking sector). Foreign-owned banks come from banking groups from 11 countries. In terms of their share in total assets of the banking sector, the most significant come from Italy with 22% of overall share, followed by Austria and Greece with 15% each, France 10% and all other countries with 12% of share.

Today, according to the report of the National Bank of Serbia for the first quarter of 2016, there are 30 banks operating in the Serbian banking sector, of which: 23 banks in foreign ownership and 7 banks in domestic ownership.

The aim of the study is to examine:

- Profitability of banks prior to the takeover and possibility of predicting future targets. Namely, a large number of empirical studies confirmed that immediately prior to takeover, after the announcement of the intention for takeover, there is a decline in profitability compared to the industry average.
- Profitability of banks in the post-takeover period. In literature there isn't much agreement on profitability movement after the takeover. Some authors confirm decline, whereas others confirm an increase in profitability shortly after the takeover.

- Is there a difference between profitability prior to and after the takeover, and in which period was it greater?
- Are there any, and if so which, factors that influenced profitability movement in four years' time?
- Are there any factors whose effect on bank profitability was different in pre- and post-takeover period?
- Research contribution, in terms of evaluation of the Serbian market attractiveness, to explain the reasons for further consolidation of the banking sector as well as support for the domestic banks in terms of analysis of factors which are to be influenced in order to prevent banks from becoming targets of hostile attacks.

1. Theoretical background

1.1. The Characteristics of the Target Bank before the Acquisition

A large number of empirical studies in literature dealt with the study of characteristics of target companies (Aharony and Barniv (2004), Harford et al. (2012), Humphery and Powell (2014), Mesulis et al. (2007), Moeller et al. (2004). One of the first research studies done on market for corporate control in Great Britain in 1960s concluded that target companies were smaller in size, less profitable and had a lower growth rate compared to the industry average Singh (1997). According to Baker and Kennedy (2002), target companies are more often less profitable measured by indicators ROA and ROE compared to the industry average. This corresponds to the research of Palepu (1986) according to which companies with lower return rate are targets of hostile attacks. There is a high level of agreement in the literature on measuring profitability of target companies. Most studies confirm that target companies show a decline in profitability and performance indicators compared to the industry average. First empirical studies to confirm this were the aforementioned studies of the authors Singh (1997) and Meeks (1977). These authors also studied takeover likelihood and came to a conclusion that companies whose profitability was below the industry average were more often takeover targets.

1.2. Characteristics of Target Banks after Acquisitions

In regard to the results of research on the impact of takeover transactions on value, the most often used performance measurements are profitability indicators: ROE (return on equity) and ROA (return o assets).

The most comprehensive research is surely that of the authors Martynova and Renneboog (2008) on post-merger operative performances, which sums up 23 separate empirical studies on the impact of takeover activities on profitability. Mueller (1980) analyzed 247 acquisitions in the period from 1962-1972 in the USA and arrived at a conclusion that profitability declines in the first three years after the merger compared to the industry average. Indicator ROE deviated more significantly from the industry average, whereas

ROA showed a decline in profitability that was not substantial. In regard to leverage, it increased in the period of three years post-merger.

Having observed 62 public offers in the period from 1975-1977 in the USA, the authors Ravenscraft and Scherer (1987) arrived at a conclusion that there is a decline in profitability in the period of three years post-merger.

Authors Haley et al. (1992) considered only the largest acquisitions in the period from 1979-1984 in the USA and concluded that there was a significant improvement in profitability in a five-year period post-merger. Authors Clark and Ofek (1994) observed 25 mergers in the period from 1981-1988 and came to a conclusion that there was a significant decline in profitability two years post-merger. Ghosh (2001) observed all mergers and acquisitions in the period from 1981-1995 that made up a sample of 315 takeovers and reached a conclusion that there was a significant rise in profitability measured by net cash flow return on total assets. Author Meeks (1977), in his empirical study based on the sample of 161 acquisitions in the period from 1964-1972 in Great Britain, points to a decline in profitability in the period of up to five years post-takeover compared to the industry average. Contrary to this research, authors Powell and Stark (2005) and authors Carline et al. (2002), also analyzing the market of Great Britain, arrived at a conclusion that there was a significant improvement in profitability compared to the industry average. Authors Chaudary and Mirza (2017) investigating the market U.K. and acquisitions in the banking sector, concluded that the higher yields achieved domestic banks that were taken from domestic banks, but the banks that were taken from cross-border banks.

Authors Joash and Njangiru at al (2015) analyzed 14 banks which were taken over in the period from 2000-2014 in Kenya and found an increase in banks' profitability after the takeover. Analyzing Lithuanian market, authors MIlvydiene and Burksaitiene (2016) compared restructuring and bankruptcy on one hand, with mergers and acquisitions on the other, and determined that mergers and acquisitions are more often becoming models of restructuring. Economies of scale, economic growth and diversification represent the main merger drivers.

1.3. Factor Analysis of Banks' Profitability in the Period before and after Acquisition

Bank profitability reflects how banks operate and it should mirror the quality of management and competitive strategies, efficiency and risk management capabilities Herrero et al. (2009). Authors Golin (2001) and Rose et al (2005) defined return on assets (ROA) and return on equity (ROE) as two most relevant indicators in banking while other studies determined the importance of net interest margin (NET) of bank's profitability determinants (Demirguc and Huizinga, 1999; Ahmed, 2003).

There are many papers which analyzed factors affecting commercial banks performance according to profitability are classified into internal and external factors (Goodard et al., 2004; Albertazzi and Gambacorta, 2009; Pejić et al., 2009; Sufian and Habibullah, 2010; Ozili, 2015).

The most commonly studied external factors are a gross domestic product (Ali et al. 2011; Bikker and Hu, 2002), inflation (Staikouras and Wood, 2011) and real interest rate and monetary policy (Borio et al., 2015)

Authors Havrylchyk et al. (2006) found a positive relationship between capital and bank's profit whereby more efficient banks should have higher profits how could be able to maximize net interest income. Further, authors Iannotta et al. (2007), Athanasoglou et al. (2008) and Alexiou and Sofoklis (2009) manifested a positive effect of capital on bank profitability. Likewise, authors Busuioc and Luca (2016) argued that profitability may have a positive effect on bank level of capital if a bank increases capital through retained earnings rather than by equity issues.

In the study of 19 banks in Romania in the period from 2004-2008, authors Andries et al. (2013) found a positive correlation between bank profitability ROA and its size in regard to the bank efficiency. Moreover, the mentioned study confirmed that taken over banks have greater efficiency, i.e. M&A had a positive effect on efficiency.

In the study of 16 banks in Macedonia in the period from Q1 2007 to Q4 2013, authors Kjosevski and Petkovski (2017) found that credit risk management capital to total assets ratio and operating expense management are the most important internal factors of bank profitability.

Authors Nnadi and Tanna (2014), studied post-acquisition performances of taken over banks in the European Union and found that operative expenses, net interest margin, the equity-to-assets ratio had a negative impact on ROA. Adding to the study of banks in the European Union, Hernando (2009), found that taken over banks were bigger and more profitable than domestic banks.

There are many studies with a focus on Eastern Europe, and most of them highlight that foreign-owned banks perform better than other type of banks in terms of cost and profit efficiency.

Author Weill (2003) researched the performance of foreign-owned and domestic owned banks in the Czech Republic and Poland. He found that foreign-owned banks are more efficient than domestic owned banks in these countries. Empirical studies of authors Isik and Hassan (2002) as well as authors Grigorian and Manole (2002) confirmed that foreign banks in transition countries and developing countries succeeded in using their comparative advantages and manifest a higher level of efficiency compared to domestic owned banks. Similarly, authors Matoušek and Taci (2004) examined the cost efficiency of the banking system in the Czech Republic and concluded that foreign banks were on average more efficient than other banks. Likewise, they argued that privatization of state-owned commercial banks and more liberal policy towards foreign banks in the early stage of the transition process would have enhanced the banking system's efficiency.

On the other side, authors Havrylchyk and Jurzyk (2006) researched the efficiency of the banking system in Poland from 1997 to 2001 and found that banks' efficiency has not improved during the observed period. Authors Hasan and Marton (2003) analyzed the Hungarian banking sector during the transition process and found that foreign banks were more efficient than domestic banks. Their findings confirmed that foreign banks have used

comparative advantages of local market that is reflected in lower costs and consequently, a lower inefficiency.

In addition, authors Kraft et al. (2006) researched the bank's efficiency in Croatia from 1994 to 2000 and argued that privatization does not have an immediate effect on the higher efficiency of banks. But, they concluded that foreign banks were substantially efficient compared to domestic banks. Authors Jemric and Vujcic (2002) examined old and new bank efficiency, as well as their efficiency by size and ownership u Croatia, and their findings showed that foreign banks are the most efficient and the new banks are more efficient than old ones.

2. Methodology and Data

Study sample consists of all banks taken over in the Serbian market in the period from 2001-2012. The cut-off year is 2012 due to the consideration of post-acquisition performances of banks two and five years after the takeover and thus due to the availability of data until 2017. Of the total of 33 banks in the observed period 21 banks are foreign-owned, 13 thereof were taken over through acquisitions, 1 through merger and remaining 9 taken over banks entered the Serbian market through greenfield investments. Study sample encompasses all 13 banks taken over in the Serbian market, which represents the sample of 100% of taken over banks in the given period. Most of the takeover was carried out before beginning the global economic and financial crisis. The financial crisis in the best possible way, showed how much the market has become global (on the impact of globalization and the crisis on the economy see: Urbsiene (2013); Zivkov et al. (2016); Miklaszewska and Kil (2016). The economic and financial crisis has particularly affected the increase in risk investment and profitability of the banking sector (Treapat, 2016; Vunjak et al., 2015).

Utilized database consists of financial bank reports and annual reports on banking sector for calculating the average values of indicators for the banking sector, available at the website of the Serbian National Bank, and financial bank reports available at the website of the Serbian Business Registers Agency. Two periods are analyzed in the study: pre-takeover period (two years before takeover (T-2) and a year before takeover (T-1)) and post-takeover period (a year after takeover (T+1) and two years after takeover (T+2). The variables are parametric, the analysis will be done using parametric methods. Methods used in the study are a multivariate statistical method – discriminant analysis. Of univariate methods ANOVA and t-test are used. Purpose of using mathematical-statistical analysis is to determine the characteristics of both subsamples – chosen variables and the banking sector average, and homogeneity, in order to perform precise prediction and forecast with certain reliability. After having shown the results of the discriminant analysis, with the use of linear regression we will test the impact of factors, i.e. independent variables, on banks' profitability movement in observed periods.

Bank profitability is measured by two most often used indicators: ROA (return on assets) and ROE (return on equity). ROA ratio should be higher than 0.1, and ROE ratio should be higher than 0.15 (Jakšić et al. 2015). Other indicators for measuring profitability are:

ROE/ROA (leverage), NIMA (net interest income to total assets ratio), NI/OR (net interest income to operating expenses ratio), NIC/OR (net interest and commission income to operating expenses ratio).

Independent variables most often used in the model of linear regression are:: dummy (0 – period before takeover, 1 – period after takeover), operating expenses and log values of interest incomes, NIMA (net interest income to total assets ratio), ShEq/TLR (shareholders equity to total liabilities ratio), L/D (loan to deposit ratio) and bank size (size log assets) measured by the bank's assets size in log values.

3. Results and Discussion

The applied methods of discriminant analysis and linear regression had the following research results:

Table 1

Discriminant analysis (Wilks' Lambda)

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
T-2	.688	7.867	6	.248
T-1	.502	14.489	6	.025
T+1	.719	6.916	6	.329
T+2	.466	16.054	6	.013

Source: Authors.

Based on the above-shown table 1 it can be concluded that the result of the discriminant analysis method, p = .025 with T-1 and p=.013 with T+2 is below the significance threshold ($p<0.05$). That further implies that there is a statistically significant difference between analyzed determinants of studied banks and banking sector average.

Table 2

Canonical Correlation (Eigenvalues)

Period	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
T-2	.454	100.0	100.0	.559
T-1	.994	100.0	100.0	.706
T+1	.390	100.0	100.0	.530
T+2	1.148	100.0	100.0	.731

Source: Authors

The canonical correlation coefficient of **.**706 with T-1 and .731 with T+2 implies a very strong model and important significance and correlation of discriminant variables in the formation of differences. Both canonical coefficient and the Wilks' lambda result (sig=.025) and (sig=.013) confirm a good choice of banks determinants in the formation of differences (Table 2).

Table 3

Analysis of differences between chosen bank determinants and average values for chosen determinants a year before the takeover

	T-1		T+2	
	F	Sig.	F	Sig.
ROE	.484	.494	5.435	.028
ROA	.275	.605	6.459	.018
ROE/ROA	1.311	.264	.071	.793
NIMA	4.623	.042	1.128	.299
NI/OR	.005	.946	3.616	.069
NIC/OR	.022	.883	2.989	.097

Source: Authors

Since $p < 0.01$ is below the significance threshold with: NIMA (.042) with T-1; ROE (.028) and ROA (.018) with T+2; it can be concluded that these determinants differ substantially between the chosen banks sample and the banking sector average.

Since the discriminant analysis showed (p=.025 with T-1) and (p=.013 with T+2) that there is a significant difference, which further implies that there is a clearly defined border between chosen banks determinants, i.e. it is possible to determine the characteristics of all chosen determinants a two year after the takeover and one year before the takeover (Table 3).

Table 4

Characteristics and homogeneity of chosen company determinants and average values a year before the takeover

Dependent Variable		T+2			T-1		
		Mean	Higher/Lower	Dpr%	Mean	Higher/Lower	Dpr%
ROA	1	-.46	↓*	47.798	-1.78	↓	19.255
	2	6.73			-.38		
ROE	1	-.24	↓*	31.865	-9.46	↓	14.333
	2	1.44			-1.82		
ROA/ROE	1	4.77	↑	7.772	4.51	↓	18.058
	2	4.69			5.28		
NI/OR	1	3.98	↓	7.383	55.42	↓	10.642
	2	4.31			56.39		
NIC/OR	1	47.63	↓	3.497	89.44	↑	8.380
	2	93.58			86.09		
NIMA	1	71.52	↓	1.684	5.86	↑*	29.332
	2	130.01			4.62		

*p<0.05, note: *chosen banks determinants-1, average values for chosen determinants -2;*
Note: ↑ (higher); ↓ (lower).
Source: Authors.

Since years T-1 and T+2 differ significantly from the banking sector average, in the above-given table based on the comparison of the arithmetic means of two periods, values of chosen indicators are compared.

The given table 4 shows that banks' profitability measured by indicators ROE and ROA was lower compared to the banking sector average a year prior to takeover and two years after the takeover, in fact it differed greatly from the banking sector average in year T+2. What can be observed is the movement of ROA indicator (average value) for the whole banking sector from -.38 prior to takeover to 6.78 two years after the takeover. Leverage indicator (ROA/ROE) was lower that the banking sector average a year before takeover, but showed an increase in regard to the banking sector average two years post-takeover, which implies an increase in banks' leverage after the takeover. Also, net interest and commission income to operating expenses ratio changed, so there was a decrease of that indicator in the year T+2. With indicator NI/OR there wasn't a significant deviation in comparison to the banking sector average, but what can be observed based on the arithmetic means of years T-1 and T+2 is that there was a significant decrease of this indicator for studied banks (55.42 in year T-1 and 3.98 in year T+2). Indicator NIMA differed substantially and was higher than the banking sector average, while in year T+2 there is a decline of this indicator when compared to the banking sector average. However, comparing arithmetic means of years T-1 and T+2 shows a significant rise in indicator NIMA both for the chosen banks and the whole banking industry (5.86 in year T-1 for chosen banks and 4.62 for banking industry; 71.52 in year T+2 for chosen banks and 130.01 for banking industry).

Table 5

Classification Results[a,c] Predicted Group Membership

	T-2	T-1	T+1	T+2
n/m	10/13	11/13	8/13	11/13
%	76.9	84.6	61.5	84.6
original grouped cases correctly classified.	88.5	92.3	80.8	92.3
cross-validated grouped cases correctly classified	69.2	76.9	65.4	80.8

Source: Authors

The table 5 shows that 11 of 13 banks in both years T-1 and T+2 have the characteristics of chosen determinants (n/m) and thus homogeneity of the sample is 84.6%, leaving 2 banks with other characteristics and not those of the chosen sample. Since sample homogeneity is 84.6%, the forecast can be made with certain reliability. It can be concluded with certainty of 84.6% in year T-1, that banks whose characteristics are similar to those of the chosen banks determinants in the sample can become targets of hostile attack in the Serbian market Based on the homogeneity of 84.6% it can be concluded that, should takeover processes continue, the acquisitors may expect a deviation of ROE and ROA indicators compared to the banking sector average in two years' time after the takeover. Reliability of 92.3% represents a very good indicator of the original classification of groups and classification of groups through the coefficient of determination.

Further research sequence should explain factors which influenced the change in banks' profitability after their takeovers. Contribution in creating a model difference with

indicators ROE and ROA is 79%. Based on arithmetic means of indicators NI/OR and NIMA we see a significant change for these two indicators when comparing the period a year before takeover to the period two years after the takeover. Did net interest incomes, operating expenses and NIMA have an impact on the change in indicators ROA and ROE and in which period was banks' profitability higher?

Table 6

Correlations

		ROE	ROA
ROE	Pearson Correlation	1	.938**
	Sig. (2-tailed)		.000
	N	52	52
ROA	Pearson Correlation	.938**	1
	Sig. (2-tailed)	.000	
	N	52	52

** Correlation is significant at the 0.01 level (2-tailed)
Source: Authors.

After having shown the results of the discriminant analysis, with the use of linear regression we will test the impact of factors, i.e. independent variables, on banks' profitability movement in observed periods.

Since the correlation between indicators ROE and ROE is significant .000 and strong .938, the analysis of banks' profitability factors will follow with only one indicator ROA which had a greater contribution in creating the difference (47.798). At the beginning, tests were done to determine whether data is suitable for Panel regression model or Linear regression model (Table 6).

Test results the Breusch-Pagan: prob>chibar2 = 0.4512 is more than p=0.05 so the model is suitable for applying a linear regression model.

Table 7

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
ROA	Regression	2170.524	7	310.075	16.517	.000[b]
	Residual	826.024	44	18.773		
	Total	2996.548	51			

Source: Authors.

The result of linear regression model: p=.000 is less than p=0.05 meaning there is a significant impact of independent variables on ROA movement. (Tabel 7). The following will examine the multicollinearity variables in the model (Durbin-Watson-test) and the analysis of the individual effect of the factors on the movement of ROA.

Table 8

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
ROA	.851[a]	.724	.680	4.33281	1.729

Source: Authors.

Result of Durbin-Watson test on multicollinearity of 1.729 (it should be near two) confirms model validity. RSquare is .724 meaning that 73% of dependent variable ROA is explained by stated factors, pointing to a good choice of independent variables (Table 8).

Table 9

Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
ROA	(Constant)	-46.883	20.760		-2.258	.029
	dummy	4.338	1.749	.286	2.481	.017
	log operating expenses	-3.133	1.308	-.403	-2.396	.021
	log interest income	-19.608	4.726	-2.733	-4.149	.000
	NIMA	4.024	.612	.978	6.573	.000
	size log assets	21.069	4.934	3.054	4.270	.000
	ShEq/TLR*100	-.380	.064	-.628	-5.981	.000
	L/D*100	.007	.016	.039	.450	.655

Source: Authors.

Considering the individual impact of independent variables on banks' profitability it can be concluded that all variables, with the exception of variable L/D, had a significant impact on indicator ROA.

Dummy variable p=.017 (coeff 4.338) implies positive effect of takeovers on banks' profitability. Log operating expenses p=.0.21 and log interest income p=.000, ShEq/TLR had a significant impact on the movement of ROA, where their impact was inversely proportional to movement of ROA, while NIMA p=.000 and size log assets p=.000 also had a significant impact on ROA, where their impact was directly proportional to the movement of banks' profitability.

Stated results indicate that bigger bank (measured by the size of its assets) with lower shareholder capital leads to an increase in bank's profitability. Lowering operating expenses

and increasing net interest margin lead to an increase in banks' profitability, whereas lowering interest income leads to an increase in banks' profitability. This result of lowering net interest income is derived from abolishing the policy of soft budget crediting which was applied in the Republic of Serbia until the beginning of 2000. After 2001 with the passing of new laws, policy of soft budget crediting is abolished and there was a decrease in growth based on domestic consumption, and in that very period there was the greatest number of

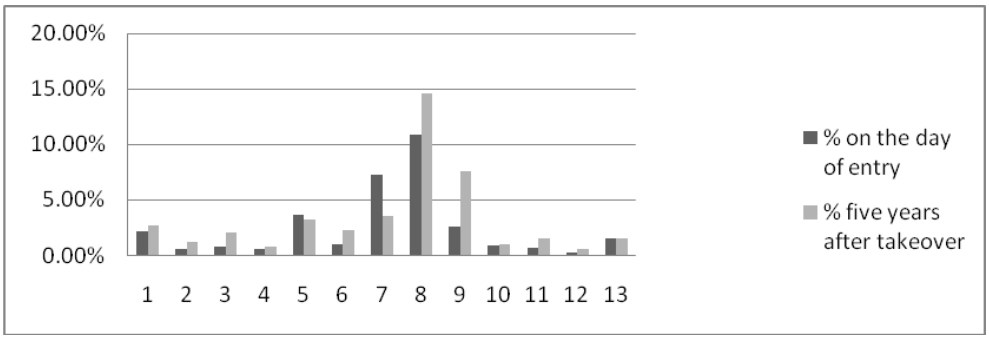
inflow of foreign banks into the Serbian market. Since foreign banks did not apply the policy of soft budget crediting there was a decline in loans compared to domestic banks, and thus a decline in net interest income.

Summing the results of discriminant analysis and results of linear regression leads to a conclusion that in year T+2 there was a significant deviation of banks' profitability compared to the banking sector average measured by ROA and ROE. Consolidation of the banking sector and taking over of banks had a positive impact on profitability movement for the whole banking sector. In year T-1 ROA was .-38 while in year T+2 it was 6.73, whereas indicator ROE in year T-1 was -1.82, and in year T+2 it was 1.44. Dummy variable in the regression model confirmed a substantial positive effect of takeover processes on banks' profitability. Since ROE and ROA have the same dominator, we conclude that significant change of indicator ROA is the result of an increase in banks' assets after the takeover, which was confirmed by the result of linear regression. Increase in banks' assets after takeover leads to a significant change in indicator NIMA (net interest income to total assets ratio); since the result of linear regression confirmed that net interest incomes were inversely proportional to the movement of banks' profitability. Significant change in NI/OR measured by the ratio of arithmetic means for the two periods, along with the result of linear regression on the impact of net interest incomes and operating expenses on the movement of ROA point to a decrease in both indicators, and the decrease had a significant impact on banks' profitability movement. Increase in assets and decrease in operating expenses should lead to an increase in banks' market share. Studying European market authors Bonin and Abel (2000) concluded that privatization is a key to an increase in market share of foreign banks. Likewise, authors Knežević and Dobromirov (2016) point out increasing number of foreign banks in transition countries and rapid progress in bank privatization. Accordingly, authors Claessens et al. (2001) investigated the profitability of banks from 80 countries from 1988 to 1995 and confirmed that foreign banks are more profitable than domestic banks in developing countries but the opposite results were found in developed countries. Similarly, author Goldberg (2004) argued that foreign banks operating in developing countries appear to be more efficient than domestic banks. The entry of foreign banks has affected domestic banks to achieve as much efficiency as possible. Also, the higher level of efficiency of the banking sector is induced by changes in industry competitive structure which means that entry of foreign banks and mergers and acquisitions have changed local competitive conditions. "I argue that foreign banks will promote financial development directly by providing high-quality banking services and indirectly as well, by three means. First, they can spur domestic banks to improve quality and cut costs; second, they can encourage the upgrading of accounting, auditing and rating institutions; and third, they can intensify pressures on governments to enhance the legal, regulatory, and supervisory systems underlying financial activities" (Levine, 1996. p.225). Contrary, author Stiglitz (1993) point out that entry of foreign banks can affect on costs of domestic banks because they have to compete with large international banks with a better reputation. Moreover, foreign banks can reduce access to finance for main domestic companies and have stabilizing or destabilizing impact on the domestic banking sector. In the situation of domestic shocks, foreign banks can have a significant stabilizing role because of their liquidity and capital as well as diversification. Authors Ani et al., (2012) concluded that a profitable banking sector is better able to stand negative shocks and

contribute to the stability. De Haas et al. (2015) analyzed 350 banks in emerging Europe from aspect how bank ownership and the Vienna Initiative impacted credit growth during the Great Recession. Their findings show that while both domestic and foreign banks strongly reduced credit during the financial crisis, foreign banks that participated in the Vienna Initiative were relatively stable lenders. Likewise, authors Barba Navarreti et al. (2010) argue that multinational banks were a stabilizing factor in Europe where they reflected a relatively stable loan-to-deposit ratio. On the other side, authors Cull and Martínez Pería (2013) confirmed that foreign banks in Eastern Europe declined lending more than domestic private banks.

Figure 1

Market share of foreign banks



Source: Authors.

Majority of taken over banks realized a gain in market share in the medium term. Only two banks reported a decrease in market share after takeover. Increase in market share is most often the result of economies of scale which is realised through a decrease in expenses and an increase in banks' assets as confirmed by the model of linear regression (Figure 1).

4. Future research directions

After the study has showed that takeover has a significant and positive impact on bank profitability in Serbia, future research will focus on two directions where one strand of research will examine of the efficiency of foreign-owned banks and domestic banks by analysis of the competitive pressure, spread level and cost structure. The second strand of research will include the analysis of profitability among the banks in Serbia from the aspect of banks acquired through takeover, merger, greenfield investments and domestic banks without foreign capital. Also, the analysis may include countries in the region and member of EU.

5. Conclusions

Results of the study fulfilled the aims of the study:

- Two years prior to the takeover there was no difference between profitability indicators of the banks which were takeover targets and the banking sector average, whereas a year prior to the takeover, due to the very announcement and certain probability of the takeover, there was a significant difference between profitability indicators of banks and the banking sector average. The prognosis is made with a certain reliability based on the sample homogeneity of 84.6%. Namely, banks operating in the Serbian market, which are not taken over, and have the same or similar characteristics to those that have already been taken over, may become targets of acquisitors.
- Post-acquisition analysis of profitability and other indicators relative to profitability showed no significant difference between profitability indicators of taken over banks and banking sector average a year after the takeover, however, two years after the takeover a substantial difference is observed in profitability indicators of taken over banks compared to the banking sector average. Profitability of taken over banks was lower in comparison with the banking sector average.
- Result of dummy variable confirmed that takeover had a positive effect on banks' profitability. Although discriminant analysis showed lower bank profitability of taken over banks compared to the banking sector average, the result of linear regression encompassing both takeover periods confirmed an increase in profitability post-takeover.
- Increase in bank's size, decrease in shareholders' capital, decrease in operating expenses, increase in net interest margin and decrease in net interest income had a significant impact on increasing bank's profitability.
- Operating expenses, net interest margin and net interest income showed a great change in arithmetic means in years T-1 and T+2.
- Based on given results a conclusion can be drawn that domestic banks are not managed in an optimal manner and that after the takeover of domestic banks by foreign banks there is an increase in banks' profitability and their market share due to the economies of scale. The takeover of banks had an overall positive effect on the profitability movement of the whole banking sector. That makes Serbian market attractive, since in short and medium term taken over banks report higher profitability, thus giving a positive signal to foreign investors to perform a takeover.
- This paper provides a contribution to the prediction of potential targets and evaluates the market attractiveness of Serbia for further acquisition process which was confirmed by the results of research.

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