Sebastjan Strasek[1], Andrej Gubensek[2]

PRE- AND POST-ACQUISITION PERFORMANCE OF ACQUIRED FIRMS IN A SMALL TRANSITION ECONOMY

The paper examines pre- and post-acquisition performance of acquired companies in Slovenia. The focus is the on analysis of median values on different financial rates. An attempt is made to empirically test the difference in long-term operating performance of the selected financial ratios before and after the transaction of acquired firms between 2005 and 2008. The sample of 29 companies encountered in takeovers were selected. The data are collected for all sample units for 4 years before transaction and 4 years after the acquisition. The results of this study suggest that an increasing trend of indebtedness is present, pointing to the typical characteristic of M&A deals, where the burdens from takeovers are brought on a target company.

Keywords: *mergers&acquisitions; financial ratios; indebtedness; Slovenia.*

Себастьян Стражек, Андрей Губенжек

ПОКАЗНИКИ ПОГЛИНЕНИХ ФІРМ ДО ТА ПІСЛЯ ПРОДАЖУ НА ПРИКЛАДІ МАЛОЇ ПЕРЕХІДНОЇ ЕКОНОМІКИ

У статті проведено порівняння показників поглинених компаній у Словенії до та після поглинання. Акцент в аналізі зроблено на серединних значеннях різних фінансових показників. Емпірично протестовано різниці у довготермінових фінансових показників до та після поглинання на часовому відрізку з 2005 р. по 2008 рік. Вибірка дослідження склала 29 компаній, що пережили поглинання, при цьому проаналізовано дані за 4 роки до поглинання та протягом 4 років після нього. Результати аналізу виявили очевидно зростаючу заборгованість, що є типовим для багатьох випадків злиттів та поглинань, за яких фінансове навантаження переноситься на компанії – об'єкт поглинання.

Ключові слова: *злиття та поглинання; фінансові показники; заборгованість; Словенія.*
Рис. 4. Табл. 2. Літ. 16.

Себастьян Стражек, Андрей Губенжек

ПОКАЗАТЕЛИ ПОГЛОЩЁННЫХ ФИРМ ДО И ПОСЛЕ ПРИОБРЕТЕНИЯ НА ПРИМЕРЕ МАЛОЙ ПЕРЕХОДНОЙ ЭКОНОМИКИ

В статье проведено сравнение показателей приобретённых компаний в Словении до и после поглощения. Акцент в анализе сделан на срединных значениях различных финансовых показателей. Эмпирически протестированы разницы в долгосрочных финансовых показателях до и после поглощения в промежутке с 2005 г. по 2008 год. Выборка исследования состоит из 29 компаний, переживших поглощение, при этом проанализированы данные за 4 года до поглощения и в течение 4 лет после него. Результаты анализа выявили очевидно растущую задолженность, что является типичной чертой многих сделок слияния и поглощения, в которых финансовая нагрузка зачастую переносится на компанию – объект поглощения.

Ключевые слова: *слияния и поглощения; финансовые показатели; задолженность; Словения.*

Introduction. Merges and acquisitions (M&A) is the field of economics which is increasingly becoming important for corporate strategy. The failures noticed in these processes and lessons learned clearly show the interwindness between dealmakers at the

[1] University of Maribor, Slovenia.
[2] TSmedia, d.o.o., Maribor, Slovenia.

corporate level and policy makers at the macroeconomic level. Firms are acquired for a number of reasons, which may evolve in a new merger waves. The majority of studies examine the 4 basic steps in acquisition, starting with establishing an acquisition motive, continuing with identification and valuation of a target firm, and following up with structuring and paying for the deal. The final step is however often the most difficult one — making the acquisition work after the deal is consummated. Proliferation of takeovers and acquisition stimulated therefore very fast considerable debate about "stockholders" vs. "stakeholders" (Gutknecht and Keys, 1993). Numerous studies examine the financial impact of M&A on stockholders' wealth (Leeth and Borg, 2010). All found target firm stockholders record large gains, but a few examine financial results of a target company after consolidation. Our paper analysis therefore covers 29 M&A cases in Slovenia, where the impact on the companies is studied.

Literature review and macroeconomic conditions in the observed M&A period. Over the last decades M&A-related issues have drawn considerable interest of academia and practitioners. Empirical studies have documented various aspects of M&A activity, some of them have focused on the post-acquisition performance. S. Cartwright and R. Schoenberg (2006) conclude that acquisitions appear to provide at best a mixed performance to stakeholders involved; investors in bidding firms frequently experience the share price underperformance in the months following acquisitions, target firm shareholders generally enjoy positive short-term returns. Poor post-merger performance of acquiring firms is not a novel finding, since academic studies of all big merger waves have shown clearly that, although shareholders of acquired firms have tended to benefit, those in the acquiring firm usually lose.

Gains from mergers could arise from a variety sources, such as operating synergies, tax savings, transfers from employees, increased monopoly rents etc. Empirical studies report mixed results. P. Healy et al. (1990) reported that merged firms have increased post-merger operating cash flow performance relative to their industries. These increases arise from post-merger improvements in asset productivity. They found no evidence that the improvement in post-merger cash flows is achieved at the expense of merged firms' long term viability since the sample firms maintain their capital expenditure and R&D rates relative to their industries. Their results differ from the findings reported by (Herman and Lowenstein, 1988) who examine earnings performance after takeovers and conclude that merged firms have no post-takeover operating improvements. More recently, (Gregorieva and Petrunina, 2013) examined the sample of 80 deals initiated by companies from emerging capital markets over 2002—2009 and found that M&As are value-destroying deals for the combined firms. The results of the long-run analysis proved the negative industry-adjusted differences between post-acquisition and pre-acquisition performance measures.

Studies on the M&A effects go back as far as 1921, when the issue was first raised by A. Dewing (1921). Clear majority of the recent research on the effects of M&A cover developed economies, however the issues of emerging economies are getting increased importance (Madelski, 2004; Gorodnichenko et al., 2014; Hagemejer and Tyrowicz, 2012).

In this paper we study the performance issues within Slovene economy, the pre- and post-performance of acquired firms on the example of Slovenia, which has all the attributes of transition economy. The literature review indicates the importance of this issue in a transition economy (Damijan et al., 2012; Bertoncelj et al., 2009). Slovenia started transition with well developed familiarity with market mechanisms, which made possible a rather rapid catch-up with Western standards and practices (Bricelj et al., 2015). Massive trade re-orientation towards developed markets, openness of Slovene economy and successful macroeconomic stabilization helped real activity to strengthen, so the nineties were marked by economic progress and the transition to market economy was relatively painless. Although the formation of new economy was initiated in the time of hyperinflation, deep recession and the balance of payment problems, the pace of economic changes has accelerated again in 2004, partly due to Slovenia's accession to the European Union. However the global crisis revealed the weaknesses of Slovenian transition model.

The global crisis which started in 2008 and was imported to Slovenia almost without delay (Rojko et al., 2011), was in Slovenian case based on the creation of Slovenian "casino" (Mencinger, 2010) capitalism:

- voucher privatization, creation of owners of assets instead of owners of companies, creation of investment funds;
- globalization of product market leading to indirect globalization of labor market and replacement of markets with flexible "labor force";
- gradual turning of savings to speculations;
- creation of virtual financial wealth;
- disappearance of social cohesion.

The majority of "bad" parameters have a clear and tight connection with easy monetary policy in the pre-2008 period. After the creation of the Eurozone, periphery countries had access to financing at much lower rates they would have been able to if they were not a part of the Eurozone. The unprecedented credit boom was an obvious answer. Rapid credit growth increased credit risks, especially in the corporate sector. Given low FDI and the absence of developed equity market, enterprises have relied primarily on debt financing, which has led to relatively high leverage ratios as compared to the region. The loan-to-GDP ratio of Slovenian banks more than doubled from around 40% of GDP up in 2003 to 92% in 2011. This increase reflected a combination of low interest rates and a massive inflow of foreign funding before the crisis, which boosted the loan-to-deposit ratio to the peak of 160% of GDP in 2008 (OECD, 2014). Excessively favorable credit conditions have underpinned unsustainable mergers and acquisitions, management buy-outs or buy-outs of public shares at high market values (Damijan, 2012).

Most shareholders are commonly concerned about the impact of acquisitions on their wealth since acquisitions have various dimensions of models which can cause negative consequences to both sides. The boom bust cycle of the pre-2008 period boosted M&A activities, but easy money agenda seems to have spoiled some basic steps in this process. Some analyses point to the so-called second phase in acquisition where the valuation of the target firm is asked. Easy credits masked M&A standards to the extent where bankers and managers lost their reliable criteria for real valuation and prospects.

On the other side, scholars argue that Slovenian economy have been faced with protectionist tendencies which omitted the process of accelerated exit of the state from company ownership in the portfolios of the state funds, i.e. the capital fund

(KAD) and the restitution fund (SOD). Historically Slovenia has sought to prevent foreign takeovers in its corporate and financial sector. As a result, annual FDI flows in Slovenia have averaged between 2% and 4% of GDP. In stark contrast to other CEE countries many of the countries biggest corporations remained in domestic hands or became a target for domestic acquirers. The characteristics described above clearly show that the frame for M&A activities in Slovenia in the pre-2008 period was highly banking-oriented and was therefore of utmost importance for the results of the acquired companies.

Methodology and results. Our empirical research started with establishing the disposability of relevant data. We used the systematic approach based on referring unit (acquired/target company), selected financial ratios and period – business year. Selected financial ratios are mainly the ratios between singular accounting categories, although to get a better insight for value added per worker we used the rates of growth. To examine the financial (debt) conditions we used the data of business year and not average values. Accounting data (i.e. ratios) were from the financial database gvin.com. For the selected financial ratios the data were obtained for the period of 2002–2012.

The first sample of companies is the sample that contains successfully executed takeovers (from foreign and domestic acquirers) between 2005 and 2008, subject to Slovenian Takeovers Act (ZPre and ZPre-1) that approved by the Slovenian Securities Market Agency. In this period the Agency approved 103 takeover bids (96 were successful). The sample includes target companies, which acquirer or acquirers, after the bid, gain control over the acquired company (i. e. own at least 50% plus 1 voting shares). In order to get a clean sample we excluded holding companies, also if they operated like such ones, e.g. Autocommerc/AHC). If the same company in the studied period was acquired more than once, we included the first time only. In our sample we could not include companies which financial ratios were not disposable for the examined period for the reasons of previous non-existence or if the acquired company was consolidated/merged with acquirer after the takeover. Second, we did not include companies previously already controlled by the acquired firm (2 cases). After the exclusion of all inadequate companies, our sample of target companies included 29 companies (cases) acquired in the time period of 2005–2008.

With the second set of data (sample) the goal was to determine the success of acquired companies vis-a-vis companies that operated in the same branch of industry as acquired company for the post-merger period. The data on financial ratios were available only till the year 2007. So, for the companies acquired in 2005, there are missing data for the first year after the acquisition. There are also missing data for the financial ratio return on equity (ROE) for the year 2007, that is why there is a gap in data of acquired firms in 2005 (first and second year after the acquisition) and 2006 (first year after the acquisition). The ratios were calculated based on the nominal values of the accounting data.

To analyse the success of the acquired firms before and after the transaction, we used two methods. First one is graphical. Median and average values of ratios are displayed to determine the movement of variables. In this way we get a basic grasp on whether the variables are rising, falling or fluctuating. With the second method we statistically test the compared groups of variables for significant difference.

To test which average measure (arithmetic or median) is most appropriate for our research, we employ the test of normality: Kolmogorov-Smirnov and Shapiro-Wilk. The results show a non-normal distribution of variables, so the median measure of the ratios is displayed in graphs (all tests are available from the authors on request). The test of normality is also a reference for using non-parametrical test for statistically testing the difference between the compared groups.

Our research compares 3 sets of groups. The first comparison is made between before acquisition and after acquisition. These two groups of variables are dependent of each other, so the non-parametric Wilxon signed-rank test is used. On the other hand, we compared the second set of variables (after acquisition) with the ratios of companies that operate in the same branch. These two groups are independent from each other, so the Mann-Whitney U and Wilxon W test are employed.

Figures 1 and 2 show the dynamic of mean values (median) of financial ratios (return on sales – ROS, return on equity – ROE, growth rate of value added per worker – VAW) and financial leverage ratios (debt financing rate – DFR, debt to equity ratio – DER) for 4 years before the acquisition (transaction year included) and for 4 years after it.

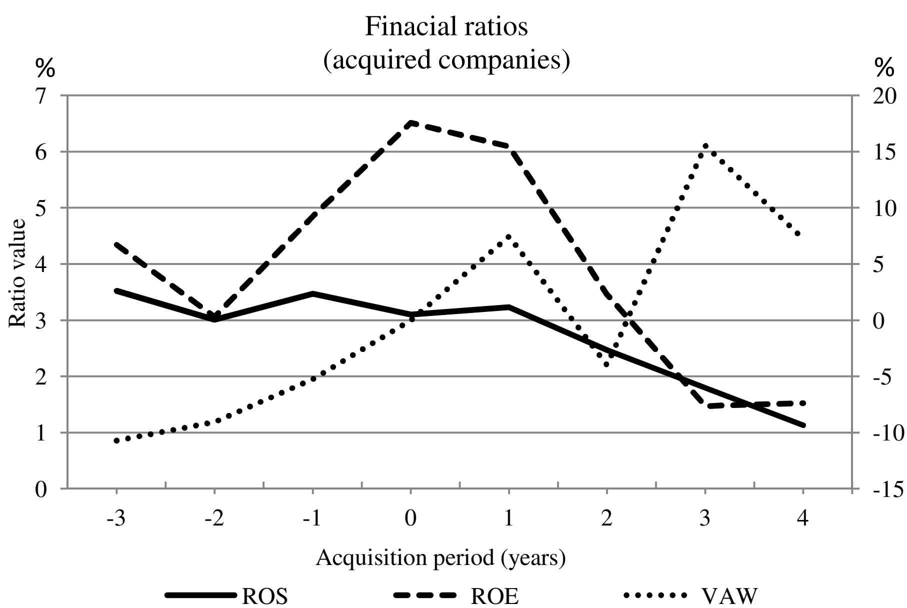


Figure 1. **Dynamics of average values of financial ratios for the acquired firms,** *own calculations based on* (Gvin database, 2013)

In the first graph (Figure 1) we can see that the average value (median) of ROS in the post-acquisition period stands at approximately same level with little oscillation. Then a falling trend is visible in the second, third and fourth years after the acquisition it starts to fall for around two percentage points. Median of return on equity in the transaction year and one year before has more than doubled as compared to the second year before transaction, after that it started to decrease (in the second and fourth year post-acquisition on the half level then previous obtained –

return around 1.5). There is a visible falling trend. Growth rate for VAW has been calculated based on the acquisition year, so that the acquisition year has value zero. Median values had risen in all years, except second and fourth years after the deal, so there is a positive trend for the examined period.

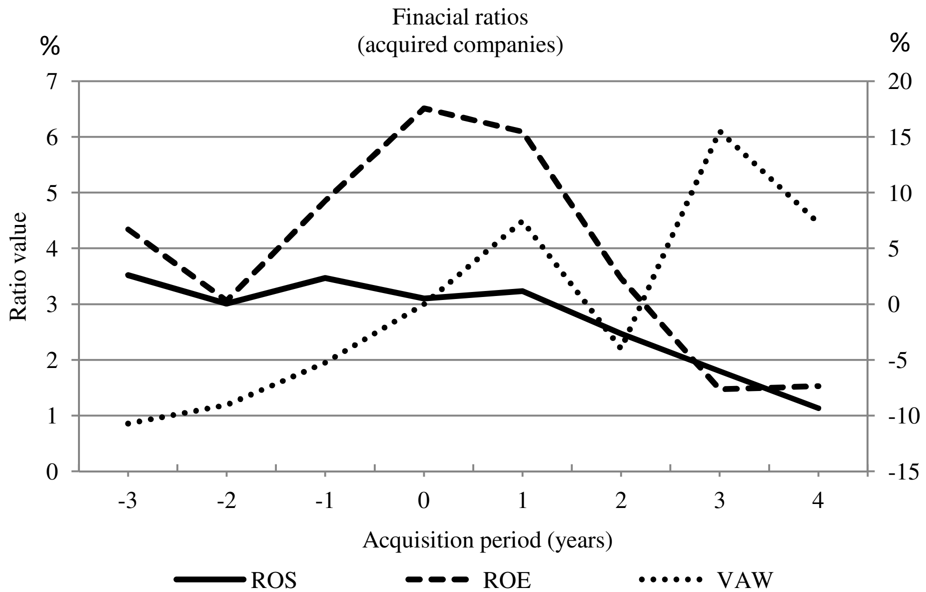


Figure 2. **Dynamics of median values of debt ratios for the acquired firms,** *own calculations based on* (Gvin database, 2013)

Although the trends of value added per worker is positive, we can estimate with the above graph that the acquired firms had better pre-performance based on ROS and ROE, rather than post-acquisition performance. But for more exact analysis we examine the significance of difference for the pre- and past-acquisition. The results are shown in Table 1.

Table 1. **Comparison of financial ratios in the pre- and post-acquisition periods,** *own calculations based on* (Gvin database, 2013)

	N	Average before (median)	Average after (median)	Difference of averages[1] (median)	Significance
	Financial ratios				
ROS	29	4.00 (3.39)	0.53 (1.87)	-3.47 (-1.52)	0.030**
ROE	29	4.87 (4.83)	-17.24 (2.71)	-22.11 (-2.12)	0.020**
VAW	29	26,031.52 (27,784.10)	127,578.94 (32,144.71)	101,547.42 (4,360.61)	0.000*
	Financial leverage ratios				
DFR	29	37.40 (33.53)	45.47 (46.62)	8.07 (13.09)	0.000*
DER	29	84.62 (56.59)	152.53 (88.61)	67.91 (32.02)	0.000*

[1] Difference of averages: after – before; * Significance level 1%, ** Significance level 5%.

Dynamics of average values – median (Figure 2) for both ratios of financial condition show the increase for all the examined years. We can see that proportion of debt in relation to capital is increasing (debt to equity ratio – DER has risen). Also, the median of debt in comparison to all assets of companies has risen (the increase of the median debt financing rate – DFR). Their median values are moving from the lowest in the first examined year (-3): 31.38 for DFR and 56.54 for DER; to the highest in the last period (+4): 50.03 for DFR and 101.64 for DER. Here also an increasing trend for indebtedness is present.

One can find the reasons in the production sector investments etc., but also in some financial aspects of the takeover processes. Typical characteristic of transition economies of bringing the burden of a takeover on a target company resulted in steadily increasing level of financial leverage ratios for acquired firms, as shown by higher DFR and DER ratios. There is some recession effect as well, since the global financial crisis impacted Slovenian economy with no delay and with huge losses.

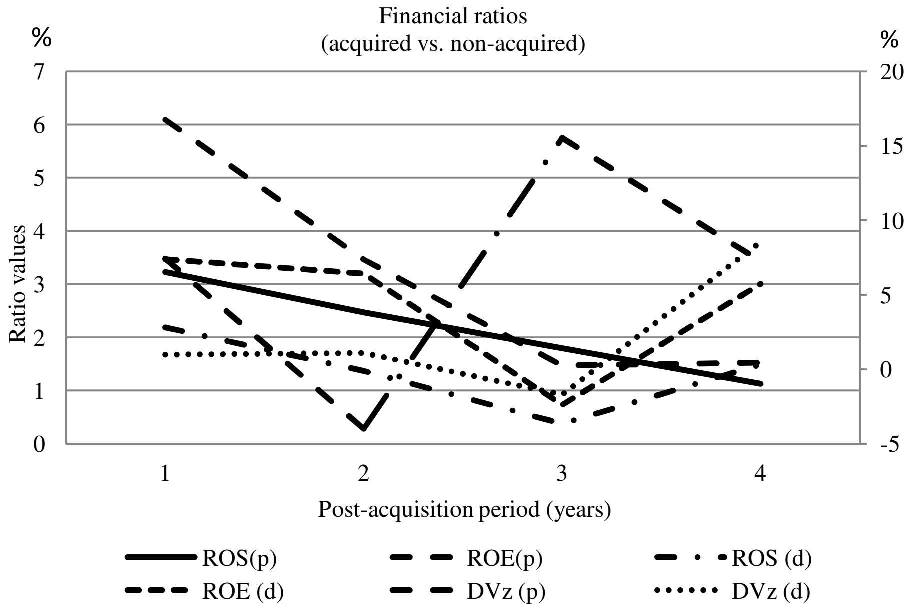
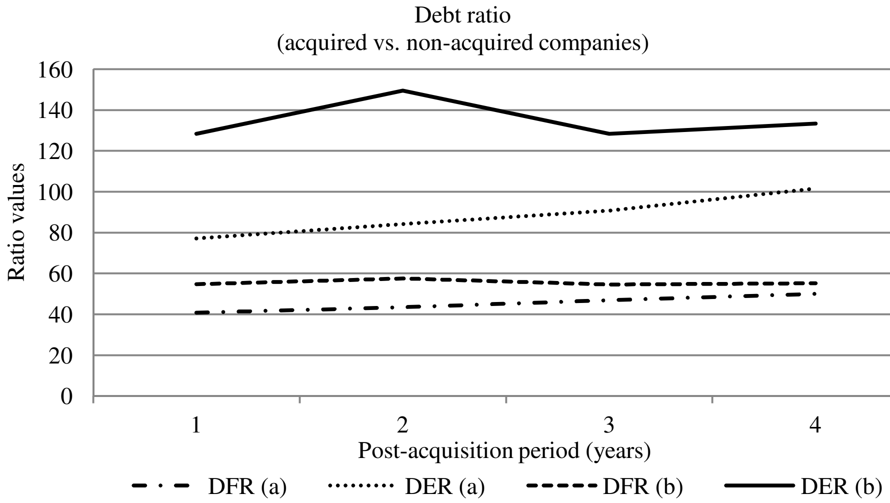


Figure 3. **Dynamics of average (median) values of business ratios of acquired firms from the post-acquisition period (comparison between acquired firms and other companies from the same industry),** *own calculations based on* (Gvin database, 2013)

Table 1 shows the comparison of average values and medians of financial ratios before and after acquisitions. Also, the differences of averages and medians are presented. In the last column we can see the significance of differences. All results (Appendix 3b) are significantly different from each other at 1% and 5% levels. Because there are some individual data that deviate a lot from the average and also does not distribute normally, it is better to make use of median values, which represent more accurate measure. For the return on sales (ROS) there is a 1.52 drop of median value from the pre-acquisition period (3.39) to post-period (1.87). As well return on equity (ROE) diminishes (-2.12) in the post-acquisition period (2.71). If we take account based on the average values, the difference is much more extreme (-22.11). The growth rate of VAW is through the examined period getting higher for 101,547 EUR per worker and 4,360 EUR per worker, respectively. Looking at indebtedness ratios, we can see that the ratios are significantly different (at 1% level) for both debt financing rate (DFR) and debt to equity ratio (DER) for 13.09 and 32.02, respectively, based on the difference of medians.



a – acquired companies; b – non-acquired companies from the same branch

Figure 4. **Dynamics of average (median) values of business ratios of acquired firms from the post-acquisition period (comparison between acquired firms and other companies from the same industry),** *own calculations based on* (Gvin database, 2013)

Figures 3 and 4 present visually the motion of median values of our financial and debt ratios in the post-acquisition period (4 years). The comparison is done for the acquired companies that we studied and the group that operates in the same branch but did not experience takeover. The values that we attained for the "branch" group are from the same database as for the acquired firms and are also structured as the first group. Graphical analysis shows that the acquired companies performed better than their branch counterparts in the first 3 years after the takeover, but not so in the last year. Also, looking at the leverage ratios, the acquired firms did better performance (less debt and better debt-to-equity ratio) than other companies in the same branch. The difference is apparent in the debt-to-equity ratio (DER).

For the analysis of the average and median values of the selected financial and debt ratios we use same statistical approach as for the comparison between before and after acquisition groups. The results in Table 2 show statistically significant for 4 out of 5 ratios to be different at 1%, 5% and 10% levels. Median value of return on sales (ROS) is, in the post-acquisition period, higher for the acquired companies by 0.61% points, which is still statistically significant, but on the relative low level of 10%. For

ROE the median value is higher for the acquired firms, but the difference is insignificant as compared to the companies in the same branch that were not acquired. Much different result can be seen between the average and the median values, which indicate the deviation in the sample data. At the 5% level there is a statistically significant difference between the compared groups for the value added per worker ratio. The difference is about 2.900 EUR in value added per worker for companies that were acquired. Significant difference at high level (1%) is also noted at leverage ratios, which confirm the statistical differences between compared groups and better debt and debt to equity terms for the companies that did not experience a takeover in the period examined.

Table 2. **Ratio comparison for acquired and non-acquired companies from the same branch (post-acquisition period),** *own calculations based on* (Gvin database, 2013)

	N	Average of acquired firms (median)	Average of branch firms (median)	Difference of averages[1] (median)	Significance
	Financial ratios				
ROS	29	0.53 (1.87)	0.87 (1.26)	0.34 (-0.61)	0.084***
ROE	29	-17.24 (2.71)	0.57 (2.48)	-17.81 (-0.23)	0.425
VAW	29	127,578.94 (32,144.71)	31,831.74 (29,333.50)	-95,747.20 (-2,811.21)	0.027**
	Financial leverage ratios				
DFR	29	45.47 (46.62)	53.83 (55.79)	8.36 (9.17)	0.000*
DER	29	152.53 (88.61)	141.94 (133.60)	-10.59 (44.99)	0.000*

[1] Difference of averages: non-acquired – acquired companies; * Significance level 1%; ** Significance level 5%; *** Significance level 10%.

Conclusion. In this paper an attempt to explore M&A activity in Slovenia in recent years has been made. Usually the research on M&A is done for financial performance of stocks, but given the relative small size of the economy and the limited number of companies traded at stock exchange, the focus was made on the operating performance and gaining some insight into the performance of companies engaging in M&A. First, the goal was to empirically test the difference in long-term operating performance of the selected financial ratios before and after the transaction of the acquired firms between 2005 and 2008. We collected the sample of 29 companies that had takeovers. The data were collected for all sample units for 4 years before the transaction and 4 years after the acquisition. The results show significantly worse performance in the post-acquisition period than before it. On average there were lower returns on sales and equity with little added value and higher indebtedness.

Second, the acquired companies in the sample for the post acquisition period were studied in reference to other companies active in the same branch. In this way the insight of external (macro) economic influences on companies has been gained. The results show moderate, but better performance in sales and value added for the acquired firms, but no significant difference in profitability (ROE) between two studied groups. Comparison of debt ratios show greater indebtedness of companies that were not acquired.

This study confirms well known characteristic of transition economies, where the burdens from acquisition is brought on a target firm, which results in steadily increasing level of financial leverage ratios of the acquired firms. This aspect of M&A activity will demand profound investigation in the future.

References:

Bertoncelj, A., Kovac, D., Kavcic, K. (2009). Intended vs. achieved objectives in mergers and acquisitions. Ekonomska istrazivanja, 22(2): 54–65.

Bricelj, B., Jagric, T., Strasek, S. (2015). Anatomy of the global financial crisis: the liquidity evidence. In: Global Business Conference 2015, Tignes, February 2nd-6th, 2015.

Cartwright, S., Schoeneberg, R. (2006). 30 years of mergers and acquisitions research: Recent advances and future opportunities. British Journal of Management, 17(S1): S1–S5.

Damijan J., Kostevc, C., Rojec, M. (2012). Growing lemons and cherries? Pre- and post-acquisition performance of foreign-acquired firms in new EU member states. Licos Discussion papers 31812, KU Leuven.

Dewing, A. (1921). Statistical tests of the success of consolidation. Quarterly Journal of Economics, 36.

Gorodnichenko, Y., Svejnar, J., Terrell, K. (2014). When does FDI have positive spillovers? Evidence from 17 transition market economies. Journal of Comparative Economics, 42.

Grigorieva, S., Petrunina, T. (2013). The performance of mergers and acquisitons in emerging capital markets: new evidence. National Research University Higher School of Economics Working Papers BPP 20/FE.

Gutknecht, J. and J. (1993). Merges, acquisitions and takeovers: main training morale of survivors and protecting employees. Academy on Management Executive, 7(3): 26–37.

Gvin Database (2013) // www.gvin.com.

Hagemejer, J., Tyrowicz, J. (2012). Is the effect really so large? Firm level evidence on the role of FDI in transition economy. Economics of transition, 20.

Healy, P., Palepu, K., Rubak, R. (1990). Does corporate performance improve after mergers. NBER Working Paper Nr. 3348, Cambridge.

Herman, E., Lowenstein, L. (1988). The efficiency effects of hostile takeovers. In: J. Coffee jr., L. Lowenstein and S. Rose-Ackerman (eds.). Knights, raiders and targets. Oxford University Press, New York.

Leeth, J., Borg, R. (2010). The impact of merges on acquiring firm shareholder value. The Cliometric Society, Bentley College Jacksonville University.

Madelski, M. (2004). Post acquisition performance of Acquiring Firms in transition Economies: Example of Poland. Cass business School Poland.

OECD (2014). Economic survey: Slovenia // ec.europa.eu.

Vlasic, G. (ur.), Krupka, Z. (ur.), Pavicic, J. (ur.) (2015). Winter Global Business Conference, February 2nd-6th, 2015, Tignes, France: conference proceedings. Zagreb: Innovation Institute, cop. 2015, pp. 45–54.

Стаття надійшла до редакції 3.11.2015.