Mergers of Corporations and Causes of their Failure

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This paper presents the results of research on the efficiency of mergers carried out in the Czech Republic. The aim of the research is to find out if the mergers have met the expectations of the management and the owners of the merging companies. The methodology of the solution is based on the determination of the success factors of mergers, the classification of the level achieved by the mergers, the separation of the successful ones from the unsuccessful ones, the identification of the problems and the formulation of the hypotheses. The object of the analysis is a representative sample of mergers of all those carried out in the Czech territory at the interval of 6 years. The effect of the company size on the success of mergers is also examined. The results were verified testing the hypotheses with empirical data. The tests performed with the data taken from financial statements of the recent 7 years have confirmed that failure of mergers can be expected in 55 %-68 % of the basic set, i.e. all mergers implemented in the monitored period, with 95 % reliability. Research has found no direct correlation between the size of the acquiring company and the success of the merger. The results of the questionnaire research lead us to the conclusion that the highest risk in merger implementation in the Czech conditions is maintaining of employees and customers; on the other hand, a merger that follows an acquisition and thus represents finishing of the transformation process of a company seems to be trouble-free.

Keywords: Mergers and Acquisitions of Corporations; Merger Classification Methods; Merger Motives; Expectations of Owners; Financial Indicators; Success of Mergers; Regression Analysis.

Introduction

Mergers and acquisitions form a significant part of direct investments and are a popular strategy of the management of trading companies and are motivated by the global players recognized today whose expansion to the international level was performed through mergers, more efficient resource use or the typical motive of cost savings, which is usually a prevention of expected problems with profitability or solvency. However, irrespective of the motivation or enthusiasm with which the mergers are implemented, their result is often a failure. This assertion represents the most frequent conclusion of research studies dealing with the issue of mergers and acquisitions (for more see e.g. Towers Perrin, 2009; KPMG, 2011). The same has been ascertained by the authors of this paper after their own research in the Czech territory. The aims of this paper are to present this result and initiate the discussion on selected aspects and determinants of success or failure of mergers that could not be quantified up to now.

The need for more extensive investment in the USA at the end of the 19th century was an impulse for strengthening the growth potential of production and business enterprises. There was a greater number of company transformations and their merging, which often led up to a monopoly position in the market. In the years 1916–1929, oligopolies began to be promoted instead of monopolies, and with them related the vertical transformations of the company in the form of upstream or downstream mergers. Gradually, conglomerate and congeneric mergers became more and more common, the former combining companies in completely different industries, the latter combining companies in similar industries but producing different products. At the end of the last century, the attractiveness of international mergers grew, and in the last decade, a high amount of mergers were implemented as a consequence of globalization as well as support from the government and growth of private equity funds. Cross-border mergers and acquisitions are often made in the form of foreign direct investment and its tributaries and drains are constantly changing over time (Lankauskiene & Tvaronaviciene, 2011; Simelyte & Antanaviciene, 2014). This uneven development of mergers and acquisitions takes place in waves that occur at a certain level of economic development. Many scientific studies and publications describe the emergence of mergers and explain their causes. Although we cannot predict the timing of each wave of mergers and acquisitions, a number of authors finds a correlation between the activities in the market of mergers and acquisitions and the course of the economic cycle. More specifically, these issues describe e.g. Allen & Overy (2011), Bruner (2004) and Dorata (2012).

The research into mergers, especially if the author deals with their results and economic impacts, is troublesome, mainly due to the fact that success is an abstract term and its meaning can differ with different points of view. This has been proved by the non-homogenous approach of various authors who evaluate success based on e.g. profit criteria, the degree to which the owners’ expectations are met, prices of stocks, or as compared to costs of the opportunity which can also be interpreted differently.

First of all, it is necessary to find an objective way to evaluate the economic effect of a merger. In our opinion,
this can be the profit or loss of enterprises in the individual years before and after the merger implementation (Kocmanova & Simberova, 2011; Kraftova et al., 2011; Sedlacek et al., 2014). Before we start a detailed analysis or presenting results in percents, we need to deal with the impact of mergers from the macroeconomic perspective, i.e. the changes in the productivity of the combined companies as a whole (Hyblova, 2014). The key is a comparison of the total profit of randomly chosen sample of companies before and after the transaction. The results are presented in Figure 1. The trendline in the graph shows that the total economic effect of mergers is neutral or slightly negative. We can therefore reject the hypothesis that the total effect of mergers is positive although the percentage expression of study results speaks in favour of unsuccessful mergers because in the total sum one successful merger can make for more unsuccessful ones. However, as we will present later, the total effect is not as negative as when evaluated separately.

An implementation of each merger or acquisition is preceded by the company owners’ decision that can be motivated by various factors. This is the initial point of research into transaction consequences as the utility value of its implementation depends on the motivation that came at the very beginning. Company KPMG (2011), one of the Big Four auditors, has published a study showing that the most common reason for M&A is to reach a better market position (total 48 % of transformed companies in 1997–2009). As further motives of KPMG clients who realized an acquisition or merger in this period were detected: Increase in market share (35 %), Geographic growth (27 %), Synergies of cost (19 %) and others. The common feature of all the presented rationales is the effort to achieve profit, as the main motivation for business.

Progressive globalization of the economy requires integration at a transnational scale, which puts new requirements on M&A processes and increases the risk of failure. An implementation of a merger or an acquisition is not a guarantee of success. What matters is the quality of planning and conducting all partial processes and decisions if the owner’s expectations are to be met. Mergers and acquisitions are opportunities for growth and improvement; however, it needs to be considered that they are sophisticated processes in which different companies with different cultures collide. The aims of our research presented in this paper are to determine success and failure of mergers according to appropriate methodology, to identify successful and failed mergers realized in the Czech territory, to assess the causes and compare results with studies of renowned authors. The formulated hypothesis assumes that the number of failed mergers will correspond to the data published in scientific studies and international sources of information.

The frequent cause of M&A failure is the unrealistic expectations of management and owners related to the future potential of the successor’s company, unclear conception and mistakes in strategic management, little flexibility and the inability to react quickly to changes. A huge flaw is the human factor, mainly the unwillingness to identify with the new company, management’s lack of experience and professional knowledge, and these can even spoil what was originally a good plan. The success of the transformation is threatened from the outset, if its cause is only the excessive expectation of management.

**Theory and Hypothesis**

Most of studies investigating the success of mergers irrespective of the year of implementation ascertained that 54 % up to 90 % of implemented transactions did not bring the expected benefits or ended in failure (Lovallo and Kahneman, 2003; Pfeffer and Sutton, 2006; Steger & Kummer 2007; Meyer, 2008; Waldman and Javidan, 2009). Still (2010) says, that one-third of mergers create shareholder value, whereas onethird destroy value and another one third do not meet expectations. According to KPMG (2011), which sums up the results of mergers of their clients in the past 13 years, the value for company owners after the transaction increased in 17 % up to 34 % of cases, while in the others the economic effect did not occur or the value of the company even decreased (see Figure 2).

One of the basic prerequisites for further presentation of the research is the usage of terms merger and acquisition. Authors usually do not distinguish between them and use the summarizing term M&A. However, there are significant differences between mergers and acquisitions (legal, accounting, taxation and social differences) which have economic impacts on the participating companies (Bohusova, 2011; Malikova & Brabec, 2012). Studies and
publications of foreign authors, e.g., Very (2004), Harford (2005), etc., mainly concentrate on acquisitions, which are closely related to financial flows and economic consequences for investors.

A typical feature of acquisitions is that they do not require agreement with the transaction of all participating companies and they can even take a form of a hostile takeover. The influx of new sources, the change of owners, management conception and the integration of the acquired company to the group should bring the expected returns. Mergers, which are similar to an extent to acquisitions, are not usually analysed separately (Brealey et al., 2008). However, they are not purchases but the union of owners of companies that participate in the merger (Sedlacek & Kuhrova, 2012). The price of target company plays a role only when companies with different (mutually independent) stockholders merge (Barros & Domingues, 2013). The presented research focuses in particular on mergers recorded in the Trade Register (2013) as implemented in the territory of the Czech Republic in the past six years.

The research is motivated by the needs of strategic management of corporations and advisory law corporations in solving of transformations of large companies as confirmed by reference review of Global U.S. Independent Investment Bank Moelis & Company (2016), which was involved in 151 transactions in 2015. The initial method of research is financial analysis in the form of parallel ratio indicators that will allow the classification of the level of mergers and the separation of successful transformations of companies from failed. The object of the analysis is a representative sample of mergers of all those carried out in the Czech territory at the interval of 6 years. The result of the analysis is the identification of problems and the formulation of research issues in the field of developmental trends in mergers in the context of world development, the impact of the sector of economic activities and the size of the successor companies. To quantify the causes of merger failure, a quantitative analysis is selected in the form of a structured questionnaire. Custom solutions, synthesis and evaluation of results broaden knowledge in merger theory. The presented model for the measurement of merger failure can be advantageously applied in economic decision making in any national economy as well as at the level of transnational integration groups. The necessary data are included in the current financial statements published by the companies involved in the transactions. At present, comparable overviews of developments in European and global M&A markets are published, especially in terms of their number and financial volume.

**Methodology**

The basic dataset of the mergers implemented at the Czech market in the recent four years was used to random select a representative sample of 201 Czech companies. Consequently, we explored the data in their financial reports for the following four years: the year before the merger, which represents the comparison basis for the further periods, the year of the merger, and the two years to follow. The authors assume that the integration process has finished two years after the merger and the company operations have stabilized.

When analysing the merger success, the value of stocks and the profit after tax the companies reported in their financial statements are evaluated. The procedure consists of three steps. Each one leads to an elimination of the companies whose merger can be seen as unsuccessful. The gradual elimination then leaves only those companies that successfully implemented the merger from the point of view of economic consequences and we gain the ratio of successful and unsuccessful mergers (Kourilova & Sedlacek, 2014).

Each step consists in testing if the companies meet a specific criterion. The first two are based on the assumption of a long-term company existence and its development, which is the target of each trading company. The authors are therefore convinced that a merger after whose implementation we can doubt the further existence of the company cannot be considered successful. The third step is the evaluation of profitability, or rather its development in the monitored period. At this stage, more attention is devoted to profit. However, profit itself is not a reliable indicator of a merger effect on economic results (Valouch et al., 2015). Its development is influenced not only by the processes inside the company but also the external environment. Although all of the influences cannot be identified separately, the data on profit are modified based on the development of the industry where
the company is active, which reduces the external influences to an extent.

After the non-existent companies are eliminated in the first step and the companies reporting a loss in the second step, we can test the remaining companies as regards the achieved productivity and meeting the expected synergic effect. The basic measure is return on assets based on formula:

\[
ROA = \frac{EBIT}{A} \tag{1}
\]

*ROA* - return on assets  
*EBIT* - earnings before interest and taxes  
*A* - total assets

The ROA the year before the merger is calculated using the following formula, based on the sum of values of *n* merging companies:

\[
ROA_{t-1} = \frac{\sum_{i=1}^{n} EBIT_i}{\sum_{i=1}^{n} A_i} \tag{2}
\]

The objective of the evaluation is the maximum possible reduction of external influences that affect the company regardless of its behaviour, i.e. mainly the economic development. The requirement to control this factor is even more demanding as in the monitored period there were considerable fluctuations caused by the economic (2007–2008) and then debt crises (2009). The profit in periods *Rt* to *Rt+2* is therefore modified by removing the increase or decrease in added value within the total GDP in the individual economic activities by means of the *Ig* index. The conversion of the changes of the gross added value in individual economic activities, fixed prices, individual years, as published by the Czech Statistical Office (2012) into the shape of indices is presented in Table 1. The year *Rt+1* serves as the basis. The calculation of profitability in years *Rt* to *Rt+2* is done using equation

\[
ROA_{R} = \frac{EBIT_{R} \times \pi_{R}}{A_{R}} \tag{3}
\]

Table 1

Indices of Changes of the Gross Added Value for the Profit Modifications

<table>
<thead>
<tr>
<th>Economic activity/Monitored period</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, forestry and fishing</td>
<td>1.046</td>
<td>0.941</td>
<td>0.782</td>
<td>1.073</td>
<td>1.134</td>
<td>0.779</td>
<td>0.989</td>
</tr>
<tr>
<td>Industry, mining and extraction</td>
<td>1.152</td>
<td>1.16</td>
<td>1.06</td>
<td>1.094</td>
<td>0.906</td>
<td>1.076</td>
<td>0.934</td>
</tr>
<tr>
<td>Building</td>
<td>0.997</td>
<td>1.022</td>
<td>1.063</td>
<td>0.989</td>
<td>0.99</td>
<td>1.036</td>
<td>0.955</td>
</tr>
<tr>
<td>Trade, haulage, accommodation and catering</td>
<td>1.042</td>
<td>1.087</td>
<td>1.073</td>
<td>1.062</td>
<td>0.906</td>
<td>1.017</td>
<td>1.088</td>
</tr>
<tr>
<td>Information and communication activities</td>
<td>1.138</td>
<td>1.104</td>
<td>1.107</td>
<td>1.044</td>
<td>0.979</td>
<td>1.003</td>
<td>0.984</td>
</tr>
<tr>
<td>Activities in the field of real estates</td>
<td>1.113</td>
<td>1.055</td>
<td>1.027</td>
<td>1.08</td>
<td>0.986</td>
<td>1.084</td>
<td>0.972</td>
</tr>
<tr>
<td>Professional, scientific, technical and administrative activities</td>
<td>1.056</td>
<td>0.971</td>
<td>1.106</td>
<td>1.053</td>
<td>0.909</td>
<td>1.037</td>
<td>1.023</td>
</tr>
<tr>
<td>Public administration, education, health and social care</td>
<td>1.006</td>
<td>0.991</td>
<td>1.009</td>
<td>1.011</td>
<td>1.008</td>
<td>0.992</td>
<td>0.987</td>
</tr>
</tbody>
</table>

Source: CZSO (2012) and authors

The companies after the modification can be divided into 6 groups based on the ROA development in the three years after the merger in compliance with the criteria presented in Table 2.

Table 2

The Classification of Companies by the Return on Assets Criterion

<table>
<thead>
<tr>
<th>Level</th>
<th>Classification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>successful</td>
<td>ROA0 &gt; ROA&lt;sub&gt;1&lt;/sub&gt;</td>
</tr>
<tr>
<td>2</td>
<td>successful</td>
<td>ROA&lt;sub&gt;1&lt;/sub&gt; &lt; ROA&lt;sub&gt;1,2&lt;/sub&gt;</td>
</tr>
<tr>
<td>3</td>
<td>successful</td>
<td>The values of ROA fluctuate; the weighted mean of individual years after the merger exceeds the value before the merger (weights 1, 2, 3 – the weight grows with time, considering that complete stabilization comes about 12–18 months after).</td>
</tr>
<tr>
<td>4</td>
<td>unsuccessful</td>
<td>The weighted mean &lt; ROA&lt;sub&gt;1&lt;/sub&gt;</td>
</tr>
<tr>
<td>5</td>
<td>unsuccessful</td>
<td>ROA fluctuates after the merger with a falling trend there is a loss at least in one of the periods or ROA dropped by more than 10 % (the weighted mean compared to the value before the merger).</td>
</tr>
<tr>
<td>6</td>
<td>unsuccessful</td>
<td>ROA&lt;sub&gt;1&lt;/sub&gt; &lt; ROA&lt;sub&gt;1,2&lt;/sub&gt;</td>
</tr>
</tbody>
</table>

Source: authors

The assessment is not based on absolute values but mainly on the general trend as it is assumed that a consequence of a successful merger is growth or profitability stagnation. If the merger is motivated by non-financial factors, profitability increase is not a condition, but it should not decrease.

Using the classification given in Table 2, we can determine the distribution function *π* and the confidence interval according to equation 4.

\[
\left(\pi - \alpha \frac{\sigma(1-\pi)}{\sqrt{n}}, \pi + \alpha \frac{\sigma(1-\pi)}{\sqrt{n}}\right) \tag{4}
\]

The condition for the use of normal distribution approximation:

\[
n(1-\pi) > 9 \tag{5}
\]

where:

1 – *π* – quantile of normal standardized distribution;  
*α* – level of significance.  

Hypothesis H1 – the number of unsuccessful mergers will grow faster than the number of successful mergers and their proportion in the entire number of implemented mergers will not differ from the results published in global studies (KPMG, 2011).

Division of the Sample Based on the Economic Activity Methodology

The activities at M&A market increased at a specific development stage of economy and M&A waves emerged, characterized by a specific type of combination. In line with the combination type, transactions were carried out inside one economic activity or among more economic activities.
We explored the affiliation of the companies participating in mergers to the particular economic activities. If the economic activity differs, the classification is based on the dominant activity after the merger. The results of the analysis will be summed up to a table with the numbers of companies with the particular economic activities and years of mergers.

**Hypothesis H2** – assumes a decreasing trend of mergers in traditional economic activities and increase in new, more up-to-date economic activities.

**Effect of the Successor Company Size on the Transaction Success**

According to Lehman & Phelps (2005) a merger or an acquisition is a combination of two companies where one corporation is completely absorbed by another corporation. The less important company loses its identity and becomes part of the more important corporation, which retains its identity. A merger extinguishes the merged corporation, and the surviving corporation assumes all the rights, privileges, and liabilities of the merged corporation. I.e., the more important company is expanded in consequence of the assumption of assets and liabilities of the other participating companies. Can the factor of the surviving company size affect the merger success? We divided the companies in the sample based on their relative size measured by the balance sum reported by the successor company in the statement of financial position in the year after the merger. The classification follows the criteria of company size in compliance with the European legislation (European Commission, 2005) and contains 4 categories (see Table 3). The number of mergers and their volume is examined in each category (Moeller et al., 2004). The table also shows how many mergers were implemented in the categories in the monitored period.

Separating successful mergers from the unsuccessful ones in each category and entering them into a graph, we can evaluate the effect of the size factor. We can assume that mergers of small trading companies will be simpler and more transparent.

**Hypothesis H3** – mergers of small companies in the monitored period will be more successful as compared to large companies.

<table>
<thead>
<tr>
<th>Company Categories Based on Volume of Assets (m€)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category</td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td>Balance sum</td>
</tr>
<tr>
<td>Number of mergers</td>
</tr>
<tr>
<td>Value of mergers</td>
</tr>
</tbody>
</table>

Source: European Commission 2005

**Causes of Merger Failures – Questionnaire Survey**

The objective of this step is to identify the main causes of failure of mergers in Czech territory. The chosen methodology is quantitative analysis combining the method of statistical survey using random selection and a structured questionnaire. The questionnaire is addressed to the management or the owners of all successor companies within the sample, i.e. the groups evaluated as successful and unsuccessful. This procedure is chosen to reveal a possible mistake of evaluation but also due to the fact that the group of respondents would be too small, should only the unsuccessful group be examined.

The questions are not intentionally formulated as to indicate failure – first, to standardize the questionnaire for both the successful and the unsuccessful groups, second, to retain the control function of the previous system based on the analysis of documents. This is also related to the above mentioned assumption that a merger, evaluated as unsuccessful based on the financial reports, can be perceived as opposite by the management and the owners, especially if it was motivated by non-financial factors. The last reason why success or failure are not mentioned in the questionnaire is the worry that a negative bias of the questions could be perceived by respondents as “accusation” by the questionnaire authors and could distort the responses by the effect of “role selection” as the respondents might try to respond so that they seemed as successful as possible.

The questionnaire contains 11 questions and an additional opportunity for an open answer if the questions do not provide an extensive set of possible answers. Because of the need to standardize the questionnaire, the possible causes of merger failures have to be summarized. Thanks to the fact that both groups of respondents were addressed, we can reach the conclusions in the context of the general failure and the significance weight for the risk related to specific steps can be established.

**Hypothesis H4** – the main causes of failure of mergers will not correspond to the results published in KPMG (2011) due to the specific nature of the Czech market.

**Results and Discussion**

The detailed results of the classification of successful and unsuccessful mergers in percentage terms are summarized in Tab. 4. At first successful mergers have been separated for which the going concern assumption (K1 criterion) and those that have achieved profit over the hole four-year period (K2) have been reached. Subsequently, failed mergers were identified, according to the development of the ROA indicator (K3 criterion, level 1 to 3). The remaining transformations in the sample were tested and divided into groups according to the level of return on assets (Sedlacek & Kuhrova, 2012) calculated according to equations (2) and (3).
The representativeness was lost. \( \pi(1 - \pi) \) was so low that the sample was not large enough to ensure the reliability of the results. The return rate of questionnaires does not allow us to analyse the results statistically, but we can make partial conclusions.

We used graphical analysis to test hypothesis H3. The graph shows the proportions of unsuccessful mergers from all implemented mergers to be 55 % – 68 % with 95 % reliability. Hypothesis H1 has been confirmed as regards the development trend of the number of mergers in the monitored period. The proportion of unsuccessful mergers appears in the lower interval ascertainment by the KPMG study.

The results of the analysis of development tendencies of activities in the field of mergers in the monitored period, as divided into the particular economic activities, are summarized in Table 5. It shows that activities in traditional fields, such as industry and trade, are decreasing and more up-to-date fields dominate, e.g. activities within real estates, professional, scientific, technical and administrative activities. The assumption formulated in hypothesis H2 has been confirmed.

We started before the merger by purchasing another company. The integration stage, when the company has difficulties retaining its employees and customers. Another significant reason is the legal restructuring of the company. The questionnaire survey, whose aim was to find out the main causes of failures of mergers, did not bring the expected results. The essential drawback of quantitative research was manifested – the return rate of questionnaires was so low that the sample representativeness was lost. Some companies do not wish to present their contacts publicly or do not use electronic mail; some of them do not reveal their valid addresses. We were able to get in touch with 74 % of successor companies and only 13.5 % of the number of the excluded companies in a better position.

The questionnaire survey, whose aim was to find out the main causes of failures of mergers, did not bring the expected results. The essential drawback of quantitative research was manifested – the return rate of questionnaires was so low that the sample representativeness was lost.
Conclusions

The tests performed to the data taken from financial statements of the past six years have confirmed that failure of mergers can be expected in 55%–68% of the basic set, i.e. all mergers implemented in the monitored period, with 95% reliability. This result appears inside the intervals of M&A failures presented in overview studies and research papers published by renowned auditor agencies. Also the development tendencies in the field of mergers in particular economic activities have been confirmed. The proportion of activities in traditional fields decreased during the monitored years in favour of new, more up-to-date economic activities. Compared with the first observed year was recorded a significant decrease in the proportion of mergers in industry and commerce. On the other hand we have seen significantly increased activity in sectors such as real estate activities and professional, scientific, technical and administrative activities.

The hypothesis of the direct link between the successor company size and merger success has not been confirmed. The graphical analysis showed an opposite dependence, i.e. larger companies are unsuccessful to a lesser degree than smaller companies. The reasons are probably the greater negotiation power, economies of scope, and higher resistance to external influences. To a rejection of the hypothesis of more successful mergers of small companies have also contributed transaction costs, as they relatively decrease with the size of assets and also put larger companies in a better position. The questionnaire research into the causes of merger failures has only brought some partial information, due to the low return rate of the questionnaires. The responses lead us to the conclusion that the highest risk of merger implementation in the Czech conditions is presented by the maintenance of employees and customers; on the other hand, a merger that follows an acquisition and thus represents finishing of the transformation process of a trading company seems to be trouble-free.

The results of the empirical research presented in this paper lead to further questions that have to be answered in relation to merger failures. These mainly concern the causes of failures of implemented transactions and looking for the ways to prevent them. The authors are aware that this is a complicated process affected by many internal and external factors with significant impacts on the economy of trading companies and their further development. Examining the reasons for the high failure rate allow firms to understand and determine appropriate remedial action while also providing valuable insights for companies looking to utilize acquisitions for growth to take appropriate steps in the future.

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